EVIDENTIARY HEARING

BEFORE THE

CALIFORNIA ENERGY RESOURCES CONSERVATION

AND DEVELOPMENT COMMISSION

In the Matter of:	)	
	)	
Application for Certification	)	Docket No.
Mirant Corporation's	)	00-AFC-4
POTRERO POWER PLANT UNIT 7	)	
PROJECT	)	
	)	

PUBLIC UTILITIES COMMISSION

AUDITORIUM

505 VAN NESS AVENUE

SAN FRANCISCO, CALIFORNIA

TUESDAY, OCTOBER 29, 2002

10:10 A.M.

Reported by:
James Ramos
Contract No. 170-01-001

COMMITTEE MEMBERS PRESENT

Robert Pernell, Presiding Member

William Keese, Associate Member

HEARING OFFICER, ADVISORS PRESENT

Stanley J. Valkosky, Hearing Officer

Michael Smith, Advisor

STAFF PRESENT

William J. Westerfield, Staff Counsel

Marc S. Pryor, Project Manager

Steve Baker

PUBLIC ADVISER

Marc Pryor, Acting Public Adviser

REPRESENTING THE APPLICANT

Michael J. Carroll, Attorney
Latham and Watkins

Valorie Zambito, Director, Technical Support
Mirant Americas Development, Inc.

INTERVENORS

William B. Rostov, Attorney
Communities for a Better Environment

Jacqueline Minor, Deputy City Attorney
Andria Pomponi, Camp, Dresser and McKee
City and County of San Francisco

Jody S. London, Attorney
Gruenich Resource Advocates
Neighboring Property Owners Coalition

INTERVENORS

Alan Ramo, Director
Our Children's Earth
Southeast Alliance for Environmental Justice
Environmental Law and Justice Clinic of
Golden Gate University School of Law

ALSO PRESENT

Johan Galleberg, Grid Planning Engineer
California Independent System Operator

Edward Smeloff
San Francisco Public Utilities Commission
City and County of San Francisco

Greg Karras
Communities for a Better Environment

I N D E X

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P R O C E E D I N G S

10:10 a.m.

PRESIDING MEMBER PERNELL: Good morning. This is a continuation of the application for certification for the Potrero Power Plant Unit 7 project. For the record my name is Commissioner Robert Pernell; I'm the Presiding Member. To my right is our Hearing Officer, Mr. Valkosky. To his right is the Chairman of the Commission, Commissioner Keese; he is the Associate Member of the Committee. And to Commissioner Keese's right is his Advisor, Mr. Smith.

At this time I'll turn the hearing over to our Hearing Officer, Mr. Valkosky.

HEARING OFFICER VALKOSKY: Thank you, Commissioner Pernell. On the agenda today I'd like to make a couple of corrections. Under staff, for some reason the ISO witness, Galleberg, is not reflected. I understand that Mr. Galleberg will be testifying.

And as we mentioned yesterday we'll have a discussion following conclusion of the power plant reliability topic, on those topics which the parties view as not affected or materially affected by the choice of the cooling options.

That discussion will include Mr. Ratliff's concerns yesterday about -- the way I phrase it is the withdrawal of Mirant's request to withdraw the request to amend the FDOC.

Before we start I'd like to announce for the record that Mr. Marc Pryor will be serving as Public Adviser today. Marc, if you could stand up so, everybody, if you have any questions or wish to address the Committee, please contact Mr. Pryor.

And as reflected on the agenda let's begin with the discussion regarding OCE and SAEJ's request for official notice.

As I understand it, Mr. Ramo, your clients have requested the Committee take official notice of the Attorney General's complaint versus the applicant and others, which was filed April 15th, and the CPUC report on wholesale electric generation investigation from September 2002, and a news article detailing Mirant's responses to the CPUC report, is that correct?

MR. RAMO: -- the documents we've put forward.

HEARING OFFICER VALKOSKY: Okay. I looked over -- the Committee has looked over the

papers and it seems to me, Mr. Carroll, that applicant essentially agrees that under 452 of the Evidence Code, subsections (c) and (d), these would constitute court records, in the one instance, and an official act in the other instance. Now, is that correct?

MR. CARROLL: That is correct.

HEARING OFFICER VALKOSKY: Okay, so my understanding is that if a party has provided proper notice and everything else which -- please correct me if I'm wrong, which I understand you're not contesting. But under section 453 of the Evidence Code, taking notice of these documents would be mandatory. Does anybody disagree with that?

MR. CARROLL: We disagree with that.

HEARING OFFICER VALKOSKY: Okay.

MR. CARROLL: We don't read it to be mandatory; we read it to be within your discretion.

HEARING OFFICER VALKOSKY: Okay. Mr. Ramo, do you read that as being mandatory under 453 or discretionary?

MR. RAMO: I read that as mandatory. But I want to be precise as to what we're asking

the Committee today to judicially notice. We aren't asking the Committee to judicially notice the truth of the matters asserted.

What we are putting forward is that there is, under California Environmental Quality Act, a controversy by experts, based on facts. And under section 15064(f)(5) and (g) of the CEQA guidelines that is sufficient for a member of the public to identify a potentially significant adverse impact.

I think we'd all agree if the contentions were true, and that there were blackouts being caused by misconduct that would certainly be a significant impact.

So I think Mr. Carroll's response was a concern that in one part we were actually asking the Committee to make a finding, where that's not what we're doing.

HEARING OFFICER VALKOSKY: So, essentially you're asking the Committee to recognize the fact that in the one instance the complaint has been filed by the Attorney General, and in the other instance a report has been issued by the PUC, but not necessarily the truth of the assertions, allegations or analysis contained in

those documents?

MR. RAMO: That's correct.

HEARING OFFICER VALKOSKY: Mr. Carroll, do you have any objection to that?

MR. CARROLL: We're pleased with that clarification because we don't believe that you could take judicial notice of the truth of the matters asserted in those documents. So we're pleased that the scope of the request is limited, as Mr. Ramo just described.

We still object to the Committee taking notice on the grounds of relevancy. We don't understand the relevancy of what may or may not have happened last year to a review of Potrero Unit 7.

HEARING OFFICER VALKOSKY: Okay, the issue of relevancy aside for the moment, at least my interpretation of a lot of these rules of evidence is essentially they are to protect a lay jury from undue influence by, in this case, various reports.

That's not the case. I mean we have two Commissioners who are certainly experts in policy matters, who are well aware of these documents. And they have, I'm sure, their own views on them.

CHAIRMAN KEESE: Yes, Mr. Valkosky, speaking for myself, we're aware of these documents. We have done our own analysis. We have come to our own conclusions with respect to what took place.

So, the question of taking judicial notice when we perused them quite thoroughly. We have notice of them, so, you know, the question of whether we should take judicial notice in a way that implies to me you're taking judicial notice of something else on the outside. Where in our internal processes we have already perused all of these documents without them being put forward before us.

So, it seems to me that we've got them; we may as well just acknowledge that we're aware of them.

MR. CARROLL: Let me say --

CHAIRMAN KEESE: Recognizing your point that that doesn't mean that we're accepting everything that's in there.

MR. CARROLL: Let me say, while we continue to object for the record to the Committee taking judicial notice of these, should the Committee decide to take judicial notice of these,

we're very confident that the Committee will recognize them for what they are.

HEARING OFFICER VALKOSKY: Okay, the Committee will take this matter under submission. That takes care of exhibits 58 and 59 as we've tentatively identified them.

The last of the exhibits subject to judicial notice is exhibit 60, which is a news article containing Mirant's responses to the PUC report.

Mr. Ramo, is it your contention that that is something that is properly subjected to judicial notice?

MR. RAMO: Yes. I would -- give me a minute.

I would refer to 452(h) -- facts and propositions that are not subject to dispute. Again, I am not offering this for the truth of the matters asserted, but this is to indicate that from the question, I thought it was appropriate, since they agree that the document is authentic. They haven't questioned that. It's from the applicant that there are at least two sides to this issue. And that the other side ought to be part of the record if we're presenting the Public

Utilities Commission report.

HEARING OFFICER VALKOSKY: Okay, I understand it, so let me clarify basically the purpose that this would serve, and again, not the truth of Mirant's refutations to the PUC report, but rather the fact that the issue is highly disputed. Is that a fair summary?

MR. RAMO: That's correct.

HEARING OFFICER VALKOSKY: Mr. Carroll, do you have anything to add to that?

MR. CARROLL: No, I don't. I think on the same grounds that we object to the notice, judicial notice of the previous documents we would object to judicial notice of this document.

On the other hand, if the Committee were inclined to take judicial notice of the first two, then I think it would make sense to also take judicial notice of the other side of the coin.

CHAIRMAN KEESE: And I would mention, Mr. Valkosky, that in a similar manner to the previous two documents I believe that the applicant, in another capacity, as most of the other companies named, has already furnished to each of the Commissioners their reports. So that the Commissioners are aware of the contents of

those reports from other activities of the Commission.

HEARING OFFICER VALKOSKY: Okay, thank you. All right, unless anyone has anything else to add on the official notice matter, are we prepared to proceed with the evidentiary presentations? Is that on official notice? Okay.

Mr. Carroll, your witness on power plant reliability.

MR. CARROLL: Thank you. Applicant calls Valorie Zambito to testify on project reliability. Ms. Zambito was sworn yesterday; is it necessary to swear here again?

HEARING OFFICER VALKOSKY: I don't think it's necessary, but it's clearer on the record that way, if you could swear the witness, please.

Whereupon,

VALORIE ZAMBITO

was called as a witness herein, and after first having been duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. CARROLL:

Q Ms. Zambito, could you please state your name and title and role with respect to the

project?

A Valorie Zambito, Director of Technical Support for Mirant. And I'm responsible for the engineering and design oversight.

Q And are you the same Valorie Zambito that submitted prepared testimony in this proceeding which is now a portion of what's been labeled as exhibit 54?

A Yes.

Q And if I were to ask you the questions contained in that material would your answers be the same today under oath?

A Yes.

Q Am I correct that there are also a number of exhibits identified in your previously filed prepared testimony that you're sponsoring today?

A Yes.

Q And are you also sponsoring an additional exhibit not identified in your prepared testimony, but filed and served on the parties subsequent to the filing of prepared testimony, which is a January 19, 2001 letter from PG&E to Mark Harrer confirming PG&E's ability to supply natural gas to the project?

A Yes.

Q Could you please explain the process that Mirant goes through when making plant design decisions regarding the reliability of the power plant?

A When we design a plant we take into consideration the unique characteristics of the proposed plant location, the available property for layout, construction and operations and maintenance access ability, transmission interconnections, contractual commitments, availability of water, all permit requirements, capital costs, O&M costs, et cetera, et cetera.

This includes location-specific factors related to the need for reliability such as transmission constraints.

Q And were there unique reliability issues associated with the proposed location of unit 7 that affected the design of the project?

A Absolutely. One of the most important specific location factors taken into consideration in the design of Potrero 7 was the need for a reliable source of power in light of the transmission-constrained peninsula.

Potrero 7 is designed such that each

generating unit has a dedicated generator step-up transformer, so the loss of one transformer does not jeopardize the entire plant.

Q And does Potrero Unit 7 have unique reliability elements as a result of the process that you went through and the recognition that you had of the need for a high reliability plan?

A Yes. Potrero Unit 7's design has redundancy of critical equipment, more than typically seen on combined cycle power plants that we've seen from competitors.

Redundancy of equipment, although at significant increased costs, increases reliability of the plant and is always a challenge to balance those costs with the increased reliability.

Specifically, Potrero 7's design has redundancy built into the following critical elements of the plant. We have two boiler feed pumps per HRSG train. We have two condensate pumps. Redundant air compressors; individual gas compressors per gas turbine; one dedicated generator step-up transformer per generator.

And in addition, as Mr. Jenkins described yesterday, the connections at PG&E's Potrero switchyard of both the existing Potrero

unit 3 and the new proposed Potrero unit 7 generation will be on separate buss sections in a double-buss arrangement to minimize the loss of generation in the event of a buss fault or breaker failure at the station.

The plant design maintains a 100 percent steam turbine bypass to the condenser, thus bypassing the steam turbine. This allows for continuous operation of the gas turbines for a period of time in the event of the steam turbine or its generator is unable to operate.

We've also looked at the condenser design and have selected a condenser design as a two-pass divided water box, de-aerating surface conductor that allows for continued operation of the plant in the event of a condenser tube leak.

This design allows for half of the condenser to be removed from service to make the necessary maintenance repairs while the plant continues to operate at a reduced load.

The project also has redundant boiler feedpumps sized to allow the plant to run at full load in the event one pump per HRSG is out of service.

And finally, an enhanced spare parts

inventory is planned to insure that parts will be available for prompt replacement in the event of a failure.

Q Are there other non hardware factors that you believe will also contribute to the reliability of Potrero unit 7?

A Yes. I think one advantage that Potrero unit 7 has is that we have trained plant personnel onsite operating the existing units which includes a conventional type unit, Potrero 3, as well as the peaking gas turbines Potrero 4, 5 and 6.

Additional personnel will be hired for the increased workload, however they will be integrated into the existing employee base. Thus, existing trained experienced state-certified Mirant workers will be part of the team operating the new facility.

In addition, these well trained personnel or employees will be available to train and support the new employees.

Mirant also has a long-term service agreement, referred to as an LTSA, with General Electric, which essentially brings to bear on the project all of GE's operating experience with similar projects throughout the world.

As part of the long-term service agreement there will be a GE-trained contractual service manager onsite to provide technical support to the GE systems.

Q In your opinion, is a two-on-one design, such as that being proposed at 7, inherently more reliable than a one-on-one design?

A Yes. A two-on-one design consists of two gas turbine generators, two HRSGs, boiler feedwater pumps, one steam turbine generator; whereas, a one-on-one design has only one gas turbine, one HRSG, et cetera, supplying steam to one steam turbine.

The two-on-one design allows the plant to continue operating if one gas turbine, HRSG is not operating. Having two gas turbine trains increases the probability of being able to produce electricity. If one gas turbine train, which is an HRSG, gas compressor and the pumps associated with the HRSG and gas turbine, fails, the other train is likely to be available.

In a one-on-one design, if any part of the gas turbine train is down, no electricity can be produced. If an HRSG associated with that turbine is down, no electricity can be produced.

Another very important benefit to a two-on-one design is that the plant is available for part load when one of the gas turbines is down for scheduled routine maintenance. Gas turbines require routine attention for water washes, combustion inspections, et cetera.

Q During yesterday's evidentiary hearing Commissioner Pernell asked about contingency plans that Mirant had in place in the event of an interruption of natural gas to the project.

Is unit 7 designed with a dual-fuel capability?

A No. Unit 7 is a single-fuel designed unit, burning natural gas only.

Q And has Mirant developed a broader contingency plan for what would occur in the event of a natural gas supply interruption such that unit 7 could not be operated for some period of time?

A No. Mirant has not developed a broader contingency plan. I will note that units 4, 5 and 6 do burn distillate oil. And also in the event of a natural gas curtailment, I think the curtailment of gas drives up pricing, so there's a balance there. The ISO's responsibility of

insuring reliability will come into play. I don't see it as Mirant's responsibility to have a contingency backup plan. We just modeled into it that prices might go up, and that we would work closely with the ISO in the event of an emergency or something that would happen, since they are responsible for insuring the reliability of the transmission system.

PRESIDING MEMBER PERNELL: So, am I to understand that on the site there is alternative fuel, oil fuel, not for unit 7, but for some of the other units onsite?

MS. ZAMBITO: Yes, sir. We have Potrero 4, 5 and 6 are peaking units and they do not burn natural gas. They burn distillate oil.

PRESIDING MEMBER PERNELL: They burn what?

MS. ZAMBITO: Distillate oil.

MR. CARROLL: Thank you. Does that complete your testimony today?

MS. ZAMBITO: Yes.

MR. CARROLL: At this time we would tender Ms. Zambito for cross-examination on project reliability.

HEARING OFFICER VALKOSKY: Ms. Zambito,

before we begin I'd just like to clarify the scope of your testimony. Is it correct that your testimony on reliability is essentially limited to the physical/mechanical/design elements of the project, as opposed to the way it's actually operated in the market on a day-to-day basis?

MS. ZAMBITO: Yes, sir.

HEARING OFFICER VALKOSKY: Do you have any opinion regarding the acceptability of the City and County of San Francisco's proposed condition of certification for reliability which is attachment C to Mr. Smeloff's testimony?

(Pause.)

MS. ZAMBITO: Could you repeat your question, please?

HEARING OFFICER VALKOSKY: Yeah, I'm just wondering if you have an opinion regarding -- on behalf of applicant regarding the acceptability of the proposed condition submitted by the City and County of San Francisco?

MS. ZAMBITO: Yes, I do have an opinion. I think we went to great extent to consider the reliability of Potrero 7, as well as balancing all of the other items that go into, or issues that go into place in designing a facility of this size.

It's a very complicated decision process. There are many things that need to be addressed. One of which is reliability. But there are also a number of other things that go into the design of a facility, as I mentioned earlier.

I think the two-by-one design, as I stated, provides reliability from the standpoint of we've taken additional measures to do the best we could to define a very reliable plant.

HEARING OFFICER VALKOSKY: Okay, so I take it that means applicant would oppose the imposition of that condition as a condition of certification?

MS. ZAMBITO: To modify the design to have, for instance, two one-on-one combined cycles would be a significant cost to Mirant that could potentially make the project not viable for construction.

HEARING OFFICER VALKOSKY: Okay, so --

MS. ZAMBITO: So that's a huge concern of ours.

HEARING OFFICER VALKOSKY: Okay, so you would opposed the condition?

MS. ZAMBITO: Yes.

HEARING OFFICER VALKOSKY: Thank you. Mr. Westerfield?

MR. WESTERFIELD: We have no questions on cross-examination.

HEARING OFFICER VALKOSKY: Ms. Minor.

MS. MINOR: Yes, I do have a few questions.

CROSS-EXAMINATION

BY MS. MINOR:

Q Good morning, Ms. Zambito.

A Good morning.

Q Can you clarify for us today the status of equipment ordering for unit 7? In other words, has the equipment been ordered? Is it warehoused?

A Potrero 7, we have some of our major equipment, agreements with the General Electric for the long-lead items, such as the gas turbines and steam turbine generators and all generators.

Q Can you clarify what the lead time would be for the steam turbine?

A I don't have that right off the top of my head.

Q How about for the gas turbine?

A Are you asking from date of order or release?

Q From the date of order to the time of delivery.

A Let me clarify one thing. As I said, we do have an agreement with GE for the gas turbine and steam turbines. The next step would be to, after we know exactly the design details, would be to specifically design and issue a steam turbine specification to them.

Aa far as the gas turbine specification, I think that has been already issued to GE and specified.

As far as the lead time, I don't have that schedule available to me at this point.

Q Can you give us an approximation? Is it six months, a year, 18 months?

A I'm trying to remember -- I just can't remember.

Q Okay. As a part of a number of meetings that the City and Mirant has had, particularly this year, in January 2002 some representatives from the City met with Mirant. And we were told at that meeting that, in fact, the steam turbines had been ordered for this project. Is that a correct statement?

A That's correct.

Q Are they warehoused?

A No. They are not warehoused. There are some, like I said, the steam turbine generators and gas turbines are ordered from GE.

Q Um-hum.

A And then the next step would be to -- and some of this has already been done, but specifications with details regarding very detailed specifications for the new equipment would then be corresponded between GE and finalized for issue of, for it to be manufactured.

Q So, just to stick on it, help clarify this for my purposes a little bit further, when you say it's been ordered, is this kind of a pre-order notification that we intend to order without any specifications?

A No. What we have done a few years ago when so many combined cycles were being ordered, a lot of the manufacturers were not able to -- you couldn't just call them and say you want to order it and get it in a short period of time because the demand was so great.

So, production-line manufacturing became very critical to them. And so our competitors, as well as Mirant, ordered equipment. And we had

a -- the equipment was ordered based on a given specification, which includes many generalities in terms of, you know, what kind of output voltage, are you going to build the two-by-one, do you need to have it dual-fueled, single-fueled, et cetera, with more of a higher level specification.

And that is the basis of what we call our base specification for the equipment for order. And then as we continue the project, and work on permits and things are being stipulated on us in terms of permit requirements, then we go and inform GE, issue a specification amendment, if you would, to identify those differences.

Q Thank you. Good clarification. Does Mirant currently own or operate any power plants that have hybrid cooling?

A I don't believe we do have a hybrid cooling tower.

Q And your answer is no hybrid cooling in California, and none in the continental United States?

A For Mirant --

Q Um-hum.

A -- no, Mirant doesn't have any operating hybrid towers as far as I know in the U.S. And I

don't believe we have any international ones --

Q Are you aware of any studies that compare the reliability of power plants that operate with one-through cooling versus a power plant that has hybrid cooling?

A I don't believe there's been enough data collected specifically on that. Intuitively, and based on my experience, once-through cooling requires less equipment --

Q Um-hum.

A -- and whenever you get into a cooling tower, either mechanical draft cooling tower that many of us are familiar with or hybrid towers or air-cooled condensers, the more equipment the more likelihood of failure, either in the specific equipment or controls or anything associated with it.

So once-through cooling does offer you, again I don't have data, but --

Q Um-hum.

A -- just in my experience and intuitively the more equipment you have the more probability of failure.

Q So but just in terms of any reports or analysis that has been done?

A No, I don't know of any report that's been done that specifically looks at that availability or reliability of once-through versus alternative.

Q If we were trying to find such a report or analysis can you recommend either an equipment manufacturer who may have done such a report, or another industry source?

A What comes to mind is maybe "Power Engineering" magazine. But, again, I've not seen anything specifically done to cooling methodologies regarding reliability.

I know there's NAERC data out there, but I'm not sure if it's as specific as we would like to see regarding specifically cooling tower versus once-through.

Those are a couple of places that maybe might have something.

Q Over the course of the last year in various meetings that the City has had with Mirant talking about cooling systems, there's been a suggestion that a hybrid cooling plant was less reliable.

I don't recall if you were at one of those meetings, but certainly the suggestion has

been made that a hybrid cooling plant is less reliable than a plant with once-through cooling.

Your view of that is that that's just kind of based intuitively on the difference in the amount of equipment and the mechanical interconnection as opposed to relying on any particular analysis or report?

A Yes, I would say that. As far as I know.

Q On page 4 of your testimony, lines 5 through 9, the sentence that starts: A combined -- have you found it yet -- the sentence that begins: A combined cycle configuration that has 100 percent steam bypass allows for both gas turbines to operate with the steam turbine out of service. Although this mode of operation is not recommended for long periods of time because of potential maintenance impacts."

What period of time --

A Excuse me, one second --

Q Are you still looking for it?

A Is it in my -- from today? Or is that my --

MR. CARROLL: This is page -- let me just clarify where --

MS. MINOR: Yeah, it's page 4 --

MR. CARROLL: -- page 4 of --

MS. MINOR: -- the reliability --

MR. CARROLL: -- testimony?

MS. MINOR: -- the reliability testimony.

MS. ZAMBITO: Treating a power plant as a single contingency?

MS. MINOR: Um-hum.

MS. ZAMBITO: Okay.

MS. MINOR: Yes, is that your page 4?

MS. ZAMBITO: Yes.

MS. MINOR: Okay.

BY MS. MINOR:

Q The response to question 13.

A Okay.

Q My question goes to how long could the plant operate in that mode?

A The idea of the 100 percent steam turbine bypass is to allow -- to keep your gas turbines from tripping immediately and allow some planning, if necessary.

It also will allow you to continue to operate until maybe a nonpeak time where in working with the ISO you could say I need to bring

my unit off of line because I have this issue. How much longer do you need me to operate. And try to give you some time to do that.

It's not a real clear quantifiable number of hours or days that you can operate in that. Because what happens is you are bypassing tremendous energy into your condenser. And so maintenance will be affected.

So, how long can you do it? Well, depends on how much risk you want to take on damage you want to do to the equipment. If you do it for a few hours, you probably won't have much of an impact. If you need to do it for days on end, I would expect maintenance impact. And you would have to eventually bring the unit down and do some major repairs.

And, again, I want to stress the point there is to be able to keep your gas turbines from immediately tripping in the event of a steam turbine trip, and working with the ISO or whatever group you're working with to try to keep that unit online for reliability.

Q Would Mirant have available records that would indicate plants with a similar configuration as the proposed unit 7, and what the record has

been in terms of the tripping of the steam turbine and having to operate in this mode?

A The combined cycle 7FA, it's rather new.

Q Um-hum.

A A lot of companies, what I have found maybe as recent as a year ago and a little longer than that, was 100 percent steam turbine bypass was not being used.

They would use either from 30 to a 60 percent bypass because that system is used during the startup of a unit, like a cold startup of a unit if it's been down for many days and you want to bring it on line. They would use this 30 to 60 percent, because I've heard anywhere from 30 to 60 for startup.

Now, the industry seems to be doing more to the 100 percent bypass mode because they've realized that these gas turbines are fine instruments. And you don't want them to trip off. You want to avoid as much tripping, forced tripping, as possible because of potential issues and maintenance that you might have with them.

Also, I know I'm probably going a little further than you wanted me to go, but it's kind of complicated in that with long-term service

agreements, as well, an owner would have to -- it triggers other cost components in a long-term service agreement.

So it's very expensive to an owner when your gas turbines are tripping off of line. And I think the industry has seen that the 100 percent bypass is an insurance in that area where you can keep your gas turbines operating; you don't get impacted by the forced trip; and you're also in a market where a competitor -- a competitive market you might be able to continue to operate if you have a serious need of electricity, even though your heat rate and efficiency is not very good in that mode of operation.

You can continue to operate your units if the power need is there for a period of time. And then make a management decision as to when you think you need to bring it off of line.

Q And that period of time is likely to be more in the hours as opposed to multiple days?

A That's what I would envision. Unless there's -- certainly if there's an emergency and, you know, your ISO was telling you, hey, I really need your power, we're having blackouts and we need to operate. Although there's a cost, a

serious cost impact potentially, I think a company could work with the emergency needs and provide that power.

Q Okay, thank you. Just a couple other questions. What redesign of unit 7 would be required in order to eliminate ISO's determination that unit 7 is a single contingency power plant?

A Power plants are so extremely complicated and although there are a number of areas that we and others have tried to look at and enhance reliability, there are issues, there are things, mechanical components that will, or instruments, electrical controls that could fail on a two-by-one or a one-by-one.

The commonality that you with a two-by-one, of course, is your steam turbine generator condenser and maybe some other shared systems.

Q Um-hum.

A In Mirant looking at the importance of the reliability what we have done is, based on information that's out there regarding component failure, for instance HRSGs or boilers or well known type boiler tube leaks, and are high on a forced outage type percentage. They are frequently -- I don't want to quote numbers or

percentages for forced outages on those components, but it is one of the higher areas.

So, a two-by-one gets you around that. But you get into your shared components, and, of course, with your steam turbine, although they're -- steam turbine generators, although they're very reliable, there is a potential for failure.

So, I understand where the ISO is coming from in terms of a single point contingency for a two-by-one combined cycled in their -- I won't pretend to understand their modeling and how they do that. However, I do understand and appreciate their need for conservatism in making sure that they are accurate in their determination of single point versus multiple point contingencies, because we're talking about system reliability and transmission reliability and serious issue safety, so I would expect their modeling to be very conservative.

How they model specifically, I can't answer that. I'm not an expert in that area.

As far as changing a design, I think, to make it much more reliable, multiple power plants. You go with, you know, another combined cycle.

Whether you go with two one-on-ones or you go with a one-on-one by Mirant and a one-on-one by somebody else.

The only way you can improve that reliability is by making isolated totally supportive systems for that particular power unit.

Q Okay. The City understood that over a period of many months Mirant has met with the ISO specifically on this question of whether unit 7 would be considered a single contingency power plant.

And that, in fact, ISO had referred this question to a committee that included representatives from ISO, but some folks from the industry, as well.

During the course of those discussions, and in particular any meetings that you've been involved in, has ISO said if you do the following, redesign, reconfiguration, this power plant will not -- unit 7 will not be considered a single contingency power plant?

A I don't recall. I've had several conversations with the ISO regarding the specific design and what we've done to try to increase the reliability of the facility, which you've heard in

my testimony today, some of the areas we've focused on.

Q Um-hum.

A I don't recall them telling me specifically this is a specific area is an issue and if we did it differently we can be multiple contingency. I don't recall if the subject of two one-on-ones had come up before, but, you know, I would agree that if you went with two one-on-ones it would be, because you have two power plants essentially.

Q Um-hum. Um-hum.

A And the other thing, too, I would qualify that in some instances you might go to two one-by-ones that have shared systems.

Q Um-hum.

A So you'd have to be careful with that, that if you went -- you're never going to get 100 percent reliability because you're talking mechanical components on a particular unit.

So therefore you would have to have two isolated power plants. Power plants with dedicated systems for everything, cooling water systems, compressed air. So you'd have to be very careful in your design to make sure that you get

that extreme reliability that you're looking for.

Q In response to a question about the cost of the redesign you indicated it would be quite expensive.

A Significantly.

Q In responding to that question what factors did you take into account?

A Basically in your estimate you're basically adding another steam turbine generator, and all the, as I mentioned, the systems that would have to be fully supportive of each of those power plants.

Q And your response assumes two one-by-ones?

A If --

Q -- systems, is that how you --

A If we went into -- if you wanted a more reliable -- sure I understand your question. If we were to propose two one-on-ones --

Q Um-hum.

A -- the cost would be significantly increased and the increased cost would reflect the additional steam turbine condenser, associated piping, support systems, et cetera.

Q And you believe that two one-on-ones is

the only way to address the concern about single contingency in insuring reliability?

MR. CARROLL: I'm going to object. It's a compound question and I think it needs to be broken up. There are two questions in there. Is going to two one-on-ones the only way to address single contingency and is going to two one-on-ones the only way to address reliability and I think those are two different things.

So I would ask that the question be broken up and not presented in a compound format.

MS. MINOR: Yeah, I'll be happy --

HEARING OFFICER VALKOSKY: Fair objection.

MS. MINOR: Pardon me?

HEARING OFFICER VALKOSKY: Proceed.

MS. MINOR: Yes.

BY MS. MINOR:

Q Is two one-on-ones the only way to address a single contingency concern raised by ISO?

A Yes, I believe so. Because in the ISO's testimony I think they needed the three to 30 years of forced outage in no less than three years. And I think that's very difficult.

Q Okay.

A -- difficult to attain. It's always a balance. These plants are so complicated in designing, that, yes, reliability is very important, but there's so many other factors that you're trying to balance in there. And there not only just costs, there are other complicating issues with bringing that into play.

And also, I stated in my testimony, I'm a proponent of -- and this, again, is my opinion, but I'm a proponent of you have well-trained, knowledgeable, experienced employees, you have a much better chance of success.

I think what Potrero, that site, offers you is allowing the existing operators, although they operate Potrero 4, 5 and 6, and they're not 7FA units, they're Pratt-Whitney units, they're still gas turbines.

These people are very experienced, and they've been working together for a long time. They know conventional units. They know the power plant industry. They know the ISO. They've worked with them before. That's a huge benefit at this facility.

Many of these other facilities, what we

call greenfield, they're brand new facilities, they're hiring people from all different places, they're going through a startup. It's a very highly stressed period of time.

They're all learning, although the systems are similar, every plant is different. They're jelling with their coworkers. And they're learning the specifics of the facility that they've been hired at.

So, although it's hard to quantify how much more reliability you would get from that, it's an unquantifiable positive effect by having it in the facility where you already have trained personnel.

I just wanted to bring that up as a point.

Q Thank you.

MS. MINOR: I have no further questions.

HEARING OFFICER VALKOSKY: Thank you, Ms. Minor. Mr. Ramo.

CROSS-EXAMINATION

BY MR. RAMO:

Q Good morning, Ms. Zambito. You submitted supplemental testimony with a letter from PG&E attached, is that correct?

A Is that the PG&E --

MR. CARROLL: Yes, well, it's partially correct. There wasn't any additional testimony associated with it, but we did submit the letter from PG&E subsequent to the body of the prepared testimony.

MR. RAMO: That's incorporated as part of her testimony?

MR. CARROLL: Yes, it is.

BY MR. RAMO:

Q And this is the letter that caused you to change your opinion as to whether there was sufficient natural gas available for the project, is that correct?

MR. CARROLL: Let me clarify. By -- you mean the opinion as expressed in the initial application for certification?

MR. RAMO: Yes.

MS. ZAMBITO: Yes, yes.

BY MR. RAMO:

Q What was the basis for the original opinion that there was not enough natural gas to allow Hunter's Point to operate and unit 7 to operate at the same time?

A Initially we had asked PG&E to do a

preliminary review of the gas supply system. And at that time, without getting a definitive answer from them, we were concerned that if Hunter's Point was not shut down would there be adequate gas supply for Potrero 3, Potrero 7 and the Hunter's Point facility.

So, that was our concern until PG&E came back when they did a further study, I believe they made some changes in their gas system. I can't say for sure, but I heard that they had made some upgrades on their gas system.

Subsequently they sent us a letter when they were doing their final design, and we asked them again to insure us that we would have sufficient supply. They responded with this letter in January, I believe, stating that there would be sufficient gas supply for all of the units.

Q Was there any reason for your concern originally?

A It was more of a fact of not having definitive answers. And could the project go forward. It was a risk that we would take, and we would have to be sure that we could have gas available in the event Hunter's Point remained

operating, or that there would be assurance that Hunter's Point would be shut down if there wasn't enough gas, and that Potrero 7 could proceed.

Q Do you know how close to capacity unit 7 will push the delivery of natural gas to the San Francisco area?

A No, I do not know that.

Q Now let me turn to your discussion regarding the costs of going with a, is it a one-by-one, is that correct?

A Two one-by-ones.

Q Two one-by-ones. Can you, for a lay person, explain what a one-by-one is?

A Yes. I was apologizing, my testimony earlier, I was talking about a train, and I assume everybody knows what I mean by that.

In a one-by-one design you have your gas turbine and you recover the exhaust heat from your gas turbine through the heat recovery steam generator. That heat recovery steam generator is using the exhaust gases to heat the water into steam that is then being sent to your steam turbine.

Your HRSG has its boiler feed pumps. You have condensate pumps. You have all the

associated equipment distributed control system associated with that power plant.

So, in a one-by-one you have a gas turbine and its generator producing power. And then you have the steam turbine and its generator producing power. That's a one-on-one.

In the two-on-one you pretty much double that train. You have another train, but you have a common steam turbine.

Q What is the estimated cost for the current proposed project?

A Excuse me a moment.

(Pause.)

MS. ZAMBITO: Approximately $415 million.

BY MR. RAMO:

Q And do you have an estimate of what the operations and maintenance budget per year would be for this facility?

A No. I apologize. I don't have that with me.

Q And what would be the approximate cost of a single one-by-one unit?

A Let me think for a moment. I would guess in the range of 300 to 350 million for one

one-by-one.

Q And is there a limit to how many megawatts a single one-by-one unit can produce?

A A one-by-one is probably 280, 300 megawatts. Again, those are off the top of my head. I haven't modeled --

Q And is there actually a range? It could go as low as 50 and as high as 300?

A Oh, as I was saying yesterday, you still have your turndown ratio in your gas turbine, so you can go about 51 percent turndown on your gas turbine. You can assume the gas turbine is about 175 megawatts at Potrero. And then assuming about 100 or so megawatts on your steam turbine. So, maybe a little more than 100, maybe 140 on your steam turbine.

Q And does the company have an estimate, given today's electricity prices, of the revenue expected from the current project per year?

A I don't -- no, I don't know. I don't have that information.

Q So when you stated that the cost would be so significant the company wouldn't do it, that was based on a generic analysis that said there'd be double the equipment, new generator -- two one-

by-ones, rather than a specific analysis of the profitability of each unit?

A What we had looked at was in our modeling the rate of return for the two-by-one as we have currently proposed. And knowing the significant cost of this facility, which is much higher than what we have estimated on other similar facilities. Again, the cost of Potrero has some uniqueness to it, as we were talking earlier.

And then looking at that and the rate of return for the two-by-one and knowing where we were, with an additional capital cost for, again, I want to be clear, two one-by-ones is what we were looking at, not just the one one-on-one, for the two one-on-ones, knowing that the capital cost would be significantly higher, it would not make the -- and we just did some rough figures. But it did not look like it would be a viable project with two one-on-ones.

Q But you don't recall specifically what the rate of return was?

A No, sir, I don't.

Q Is that calculation in a document?

A No. It is in a confidential financial

model run that Mirant's financial group does.

Q There is a document, but it's confidential?

A Yes. It's in part of the business analysis that the company does to determine whether the plan is a viable option for business purposes.

Q If unit 3 was torn down would there be any reason technically why two one-by-ones could not be designed to fit the area of the Potrero Power Plant site?

A Again, I think it's cost driven.

Q Okay. Now, I'm going to refer you to your testimony at page 3. Lines 4 through 6.

And in the testimony there's a question that I would paraphrase to focus on the point I'm interested in. Will the project be operated in accordance with industry norms for reliability power generation. And the response is yes.

Do you see that?

A Yes.

Q And that is your testimony today?

A Yes.

Q What industry norms are you referring to?

A GE provides, I would say -- make it broader to say equipment manufacturers, but I will focus on GE, because again the gas turbines are an extremely expensive fine instruments, mechanical pieces of equipment.

GE requires that you do routine maintenance such as water washes on your gas turbine to keep them clean and keep their efficiency up. Combustion inspection, -- gas -- inspections. There are steam turbine recommendations.

An owner can choose to follow or not follow a manufacturer's recommendation. It's in Mirant's best interest, as I believe it is in -- best interest, to keep those units highly available whether it's in a power purchase agreement market or a merchant environment, that is our business.

And when those units can run that's when we can make the profit and keep the company business. So following the manufacturer's recommendations is something that we do.

Operating practices is training employees; making sure that they have the knowledgeable tools to do their job. They're

safety trained. There's environmental training. There's operating training.

The employees get involved early on in the startup. Mirant has a practice of using our employees during the startup phase of new units, which gives them excellent training opportunities.

Those are the types of industry norms that I would expect in utility type facilities, as well as with Mirant.

Q Are you familiar with the ISO's testimony that's been introduced in this proceeding regarding single contingency?

A Yes, I read through it.

Q Now, they seem to think that the performance of similar type of facilities regardless of specifics of design results in a certain level of performance that requires a finding of single contingency for your facility.

Did I fairly state what you understand to be their testimony?

A Yes.

Q Is that the industry norm that you intend to meet?

A No.

Q Could you explain?

A I cannot tell you specifically because I do not know what the specific failures were on those units. That is confidential information. We've made an effort to try to find out so we could better respond to questions today, but we were not privy to that info.

So I can't very well comment on what those issues were and what the operational practices and maintenances practices are.

Q So when you say those aren't the norms you're going to achieve, you expect to achieve better results?

A Yes. We have -- I would like to comment, if I may. I think as more and more combined cycles come online, in particular this year and next year, because there's a number of them that are scheduled for commercial operation in 2002, 2003, we will have better data in terms of the availability of these units.

I will say that we do have a, of course Mirant tracks our availability of all of our units, and trying to do, you know, save costs and do a better job.

We do have a combined cycle facility that just came online in July, and another one

that came -- actually went commercial in July. So I don't have the data to say that yes, we are doing a better job.

There were a few blurps in the startup phase that were resolved. So I hope that this year will give us some data to say that yes, we have been performing very well.

Q Now, you probably heard the discussion about various exhibits including the Public Utilities Commission report on generator performance during the energy crisis. Were you here for that discussion this morning?

A This morning, yes, this morning.

Q That report is exhibit 59, and it states the rate of plant outages during the energy crisis was well above historical averages. Is that the industry norm you expect to meet?

MR. CARROLL: I'd object to this question as outside the scope of this witness' testimony.

HEARING OFFICER VALKOSKY: Well, I'd like to hear the witness' answer. The witness has testified that the project intends to meet industry norms. I think we're just trying to establish what those industry norms are. Answer

the question, please.

MS. ZAMBITO: I think that's a very complicated issue. And I think that various parties will have different opinions. There were -- I am not an expert in all the details of what occurred, but sometimes you have plants that are offline for scheduled maintenance, and so therefore, they're unavailable.

I think it's a very broad assumption to say that's industry standards. I just don't see how they -- it just doesn't make sense to say that's industry standard, because you have to look at specific situations.

If you could ask me a question regarding a specific plant and I knew what happened at that plant I could better answer the question.

BY MR. RAMO:

Q So I gather at this point really the only industry norms you seem to be referring to are manufacturers' recommendations for operation and maintenance of their turbines. Is that all you meant by industry norms?

A Industry norms in terms of I would take it beyond turbines, but all equipment. There are manufacturer recommendations for operations and

maintenance of all equipment.

And I have experience of operating facilities before. Utilities have industry norms of procedures regarding how many data that you take down, you know, your operator walking around the plant and taking instrument data down.

You have control room operators that are monitoring cycle performance and knowing when your temperature is too high in one area of the boiler.

So, those are more of the industry norms that I refer to, in terms of the day-to-day operation of the facilities. The training of personnel. The data collection and review. The plant engineer's role and responsibilities of that review of data.

Response time that a plant engineer might have to an issue that a digital control system might have. Those are more industry standards that I refer to, rather than the broader range, I think, that you're thinking about.

Q So you're not prepared to say today that this facility will do, in terms of outages, any better than the historical average performance during the energy crisis or the performance of similar facilities?

A Well, --

Q -- by the ISO.

A Well, again I think the -- as I said earlier, the combined cycle technology with the FA machines is somewhat new. We don't have that data available.

What I can say, that for Potrero 7 we looked at whatever information we had regarding conventional boilers or HRSG failures. And looked at what we could do there.

We looked at boiler feedpumps, typical of high failure -- higher failure rate for equipment. So, instead of having say like on your HRSG you would have two 50 percent pumps per HRSG, which means if one pump is out of service, then you could only provide half of the flow to the one HRSG.

Potrero 7 has two 100 percents, so that one pump will not be operating unless it's necessary. The other pump will be operating to support the full load for that HRSG.

Those are the types of areas that we targeted to improve reliability of the facility.

Instrument air provides high quality air to all your control instruments. It's very

important to have that system operating. So we have a backup.

Gas compressors, which again I don't have a lot of data on, but a gas compressor could have a reliability issue. So we've decided, let's have one gas compressor per gas turbine to insure us that we have that backup so that we can at least run at partial load if a gas compressor were to fail.

So, we've tried to target, based on the technical knowledge we have in operating new maintenance experience we have what areas could fail, and let's do something about it to try to mitigate that.

Q So would it be fair to summarize your testimony as saying your professional judgment, based on the design including a number of design innovations, is that this facility will do better, but you have no data at this point to support that?

A That's correct.

Q Okay. Now, also in your testimony I gather that one of the goals in the design of the project is that it be able to operate for an extended period of time without shutting down for

maintenance, is that correct?

A Yes.

Q And the AFC also states that Potrero unit 7 is expected to be fully available for its entire 40-year life, except for scheduled maintenance outages, or unexpected trips, is that still your belief?

A Yes.

Q Now, let me focus on maintenance outages. How often are we going to have maintenance outages for this facility?

A Again, General Electric has a recommended frequency of various inspections and outages for the gas turbines. Our intent is -- well, one thing I will discuss is they recommend -- well, let me back up.

The maintenance schedule is triggered by the number of hours of operation rather than clock time, clock hours. General Electric requires that you do, for instance, a combustion water wash every 1000 hours of operation.

So the nice thing about having a two-by-one rather than one-by-one, for instance, is that you can bring one of your gas turbines offline during low load period, say like a weekend low

demand, or midnight, or whatever. Do your water wash, and then be available for when your demand is again needed, or your power is again needed.

And they have a series of things like that. They have a combustion inspection that is required every so many hours. If you're interested I can make comment --

Q What I'm trying to get a feel for, I don't need to know every equipment and every outages, but I gather, particularly from the CEC Staff, that there's certain fairly significant outages. Some may be a week; some may be --

A Yes.

Q -- months. Is that generally correct? I can be more specific if you want me to refer to the testimony.

A Well, let me try and answer your question and see if it's sufficient.

If you have a plant that's running in excess of 80 percent capacity factor, you will have to have a major inspection every sixth year.

Q And what would be the duration of that?

A Twenty-eight days is what I have estimated.

CHAIRMAN KEESE: Every how often was

that? Every six years?

PRESIDING MEMBER PERNELL: Six years.

MS. ZAMBITO: Six years.

CHAIRMAN KEESE: Sixth year?

MS. ZAMBITO: Six years. Assuming, again it's all triggered by operating hours, so assuming as a high capacity factor.

They need a hot gas path inspection every third year, which can take approximately two weeks. But, again, something that Mirant, I think, can look at is for a hot gas path inspection, for instance, can you run the one gas turbine and your steam turbine while you do the hot gas path inspection on your other gas turbine.

So that although you're not available for full load, you're available for part load. Similar to what I was saying with the combustion washes.

BY MR. RAMO:

Q The reason I ask is the Commission Staff indicated that at least they mention a gas turbine might be shut down for a week to ten days during times of -- electricity, is that correct?

A Yes, it can be.

Q And but for other plant maintenance that

might be for longer periods of time their testimony wasn't clear as to whether that would also be done during low electricity demand. Is Mirant planning to only do that kind of more significant maintenance activity during low electricity demand?

A Well, certainly we would probably be working with the ISO in terms of time of the year. And it depends on the maintenance that would be required to be done if there is like a compressor wash that can be done over a weekend and there's a low demand, we can do it then.

For the major inspection that would last 28 days, then that would then be coordinated to be done during low power demand during the year.

San Francisco's a little different in terms of weather conditions, but typically you would do outages in the fall or spring. You do major outages in the spring because normally your demand is low, but you're also wanting to make sure that you have high reliability during the peak months of the summer and early fall.

So, it's a management planning tool, I guess.

Q Do you have to get the ISO's permission

for every scheduled maintenance?

A I do not know for Potrero 7.

Q Would you have any problem in a condition of compliance that would require you to have ISO permission on every scheduled maintenance which requires the shutdown of the turbine?

A I'm not sure if I'm authorized to --

(Pause.)

MS. ZAMBITO: I think we would have to better understand what your scheduled maintenances refer to. I mean for a combustion water wash I wouldn't see that you would have to talk to the ISO about doing that.

Certainly for a 28-day inspection period, that's a courtesy if nothing else. I think you would talk to the ISO to say I need to be bringing the unit down. This is my time, you know, this is the day I plan on bringing it off, is that a problem.

I think you would work with them on some of the other outages. You may or may not want to have to be required to get permission from them.

BY MR. RAMO:

Q Well, from an operational and maintenance standpoint would there be any problem

for the more significant shutdowns of the facility to agree to be subject to the ISO's direction on that?

MR. CARROLL: I'm going to object to the question because we don't know what Mr. Ramo means when he says the more significant outages.

MR. RAMO: Over one week.

(Pause.)

MS. ZAMBITO: I don't think I can respond to your question with unknowns out there regarding the specific outage or details.

BY MR. RAMO:

Q Well, the reason I ask is that there is an allegation by the Public Utilities Commission, this is at page 2 of their report, that says: Sufficient generating capacity for California's families and businesses existed during the energy crisis. But breakouts and service interruptions occurred because generators Duke, Dynergy, Mirant, Reliant and AES Williams did not produce the needed power, even though their plants could have met California's electricity needs."

Do you dispute that assertion by them?

A I don't think I'm in a position to respond to that question.

Q Now, let me ask you to look at exhibit 60, which is the letter from Mirant's lawyer in response to that report.

MR. CARROLL: We don't have that document in front of us.

(Pause.)

MR. RAMO: I will provide the witness and counsel a copy of exhibit 60.

BY MR. RAMO:

Q Now, the page numbers are somewhat cut off on the bottom, but I'll try to help you locate what I'm referring to.

On page 3 of the document there's a section near the bottom called Mirant stepped up during the energy crisis. Do you see that section?

A Yes.

Q And there's a statement in there near the bottom: Mirant generated 69 percent more power than the -- ten-year average for these units while keeping planned and forced outages within 10 percent of that average.

And my question, if you know, as Mirant's Director of Technical Support, is whether that 10 percent meant that the number of planned

and forced outages were 10 percent above the average?

A I don't know.

Q Now on page 8 and 9 there's a discussion in here, by Mirant's lawyer, of Potrero.

A Can you give me the --

Q It's discussing the March 28, 2001 stage two emergency.

A Okay.

Q And it indicates at that time, during that emergency, Potrero 3 was out on a planned outage, is that correct?

A I don't have knowledge of that.

Q Do you have any knowledge about how Mirant operated Potrero during the May 10, 2001 stage two emergency?

A No, sir, I don't. I'm not an expert witness for the operations and maintenance of the existing facilities. Would have a hard time guessing at what may have occurred.

HEARING OFFICER VALKOSKY: Mr. Ramo, I'd like to remind you that the witness explained the scope of her testimony, and fundamentally it's limited to the mechanical physical aspects, the attributes of the plant. Not any operational

profile, and certainly nothing that happened during the purported energy crisis.

MR. RAMO: I'll bear that in mind, -- the witness says she has no knowledge of the operations, I think my line is becoming -- I'll just represent to the Committee that the reason I inquired about this is as the report from Mirant party indicates -- 1 percent of the capacity of unit 3 was out.

And if we're talking about whether facilities are going to be operated and maintained in a fashion --

MR. CARROLL: I'm going to object to this, because what Mr. Ramo is doing are two things I find objectionable.

One is he's testifying. And the other he's doing exactly what he said he wasn't going to do, which is asserting that the matters contained in these documents that he's asked you to take judicial notice of are true.

MR. RAMO: Well, I'm just explaining why I wanted to ask the witness whether it was correct.

HEARING OFFICER VALKOSKY: Okay, that's fine. And to the extent that you have any

argument, everyone will get a briefing period. I'm sure we'll see lots of arguments in the briefs.

Proceed, please.

BY MR. RAMO:

Q To your knowledge does Mirant have a must-run contract negotiated with the ISO for unit 7?

A I do not think we have an RMR contract for unit 7.

Q Does Mirant intend to operate this facility in a manner that it will be available whenever requested by the ISO?

A I don't think I'm in a position to answer that question.

MR. RAMO: Okay, thank you. No further questions.

HEARING OFFICER VALKOSKY: Thank you, Mr. Ramo. Mr. Rostov.

CROSS-EXAMINATION

BY MR. ROSTOV:

Q Good morning.

A Good morning.

Q I only have a very few questions. There was a question earlier about gas curtailment, and

I forgot who asked it. I think it was either Mr. Valkosky or Commissioner Pernell.

But, anyway, in your response you said something about how during a curtailment prices are driven up and that provides a balance. You essentially said if there's a gas curtailment that prices are driven up and there's a balance there.

And I wasn't sure what you meant by a balance being there.

A Well, I guess in a gas curtailment prices are typically driven upward.

Q Right.

A And I would think that the ISO, being responsible for reliability and transmission, and an emergency need, asking for the power, that although prices are high it's up to the generator and the ISO to determine whether they are going to be operating that facility.

If Potrero 7, and I would interject also that in a gas curtailment I would think one of the things that the ISO would be doing is looking at the most efficient use of that fuel, so that facilities that are not using gas, they're using oil for instance in California, would be operated, as well as a combined cycle, for instance, that

would be significantly more efficient in its gas usage than a simple cycle gas turbine.

So, I think it's a very complicated question because there's so many -- what I meant by balance is there's so many things that are happening at that time that I don't think I can specifically say what Potrero 7 would be doing in the event of a gas curtailment.

Logically it would seem that it would be a balance between the owner and the ISO regarding the need of the facility for reliability or emergency need, given the transmission constraints at Potrero.

I think there will be other initiatives taken by the City regarding use of power and asking residents to maybe not be using the power. There are many things that would go on.

Q I'm still not totally clear. And so how will the spiking in price providing the balance, or that was just one of the factors --

A It was just one factor --

Q Okay.

A -- of the complicated picture of what might occur.

Q Right. And earlier you testified that

units 4, 5 and 6 running on distillate oil.

A Yes.

Q There's also unit 3 which I guess has a dual fuel capability at this time, is that true?

A If I'm not mistaken, Potrero 3 has not run on backup fuel since 1994. I believe that boiler is designed such that you could run on backup fuel.

There are a number of things that would clearly have to be done in order to operate on the backup fuel.

Q Right.

A But conceivably it could be done.

Q I understand that unit 3 is going to be retrofit with SCR. And at that time would it still be able to be run on backup fuel?

A The SCR design -- yes, you could run it. You could run it with the SCR. The reason I hesitate is an SCR design is dependent on its fuel that you would be using in the unit. But if the SCR is designed for natural gas, and there's an emergency and you need to be using the oil, you could operate it.

What will happen is you will have to replace your SCR, the catalyst.

Q Okay.

A Afterward.

Q Right. So would that be a likely scenario? I mean -- what's the cost of replacing a catalyst --

A Well, it's in the millions, but catalysts deteriorate with time anyway. So, it's a chemical reaction that occurs there, and it will eventually be exhausted regardless.

However, if you change your fuel you will just have to prematurely replace it.

Q And so has Mirant made a final decision about retrofitting unit 3?

A Cannot answer that. I know there's been discussions, but I do not know.

Q A couple more questions. If I understood your testimony you testified that the one-by-one design would satisfy the ISO criteria?

A Two one-by-ones.

Q Two one-by-one design, okay. And then earlier Mr. Carroll asked you a question where he asked is the two-by-one design more reliable than the one-by-one design, and I think you answered yes. I'm not sure how those two reconcile.

A Okay. If you were to put one one-by-one

on the site, just one, a two-by-one would offer you more reliability than just the one-by-one.

Q Okay.

A Because you have two gas turbines, two boilers, et cetera. The other question was how could you, from the ISO, how could you make it more reliable, what would they like to see.

Two one-by-ones; in other words, two power plants.

Q Okay.

MR. ROSTOV: Thanks, that's all my questions.

HEARING OFFICER VALKOSKY: Thank you, Mr. Rostov. Any redirect, Mr. Carroll?

MR. CARROLL: No.

CHAIRMAN KEESE: Let me clarify something. Since it was the easiest place to find it, Mr. Henneforth's testimony indicated that the annual availability of the plant would be between 92 and 95 percent.

Did you say yesterday that -- and I think he suggested -- it was probably in the AFC. Did you suggest it would be 90 percent?

MS. ZAMBITO: I believe yesterday we were talking about capacity factor --

CHAIRMAN KEESE: All right, capacity factors he indicated that your average annual capacity factor would be between 75 and 85 -- the anticipated capacity factor, as a baseline, would be between 75 and 85 percent.

MS. ZAMBITO: I can't recall --

CHAIRMAN KEESE: That's --

MS. ZAMBITO: -- what my testimony back in June was, but it did, I think, in the original --

CHAIRMAN KEESE: Is that a range close to --

MS. ZAMBITO: Yes, it's close.

CHAIRMAN KEESE: Do you have any idea what the annual average capacity factors of the current units are? The peakers obviously would be much lower.

MS. ZAMBITO: The peakers -- Potrero? Potrero --

CHAIRMAN KEESE: Potrero.

MS. ZAMBITO: -- 4, 5 and 6 are limited to 877 hours each per year due to air emissions.

CHAIRMAN KEESE: And --

MS. ZAMBITO: Potrero e --

CHAIRMAN KEESE: -- do they get there

generally?

MS. ZAMBITO: Yes.

CHAIRMAN KEESE: And Potrero 3?

MS. ZAMBITO: Potrero 3, I do not recall the capacity factor. Let me check something and see if I might have it with me.

(Pause.)

MS. ZAMBITO: No, sir, I don't have a breakout of Potrero 3 versus the peakers, I'm sorry.

CHAIRMAN KEESE: Okay. But you would assume it higher or --

MS. ZAMBITO: Oh, higher than the peakers, most definitely.

CHAIRMAN KEESE: All right. Do you have an hour limit on that? I mean do you also have --

MS. ZAMBITO: The Potrero 3 operates under the Mirant, the bubble --

CHAIRMAN KEESE: The bubble, okay. stepping back to the projected annual availability of between 92 and 95 percent, and recognizing I guess it's six years before you go out for 28 days, can you break down for me planned outages versus unplanned outages in that, again, saying you'll be 5 to 8 percent of the time it would be

unavailable? How much of that is planned outages?

MS. ZAMBITO: These are NAERC terms, so I'm going to try to define, or work through this. Availability is the number of hours -- let me see if I can --

CHAIRMAN KEESE: Well, from 100 percent, from the hours of the year I would assume that you subtract planned outages and unplanned outages --

MS. ZAMBITO: Well, --

CHAIRMAN KEESE: -- if you want to take those two broad categories.

MS. ZAMBITO: -- they complicate it, because then they call it equivalent availability factors, and equivalent forced outage rates, and so it gets a little muddled in there.

But for availability it's the number of hours available in a year, subtract the number of planned outages. And that's where we will vary from the 92 to 95 percent, as I tried to explain earlier, with the six-year outage versus the 14-day outage, et cetera.

Then the equivalent availability factor is that availability factor times one minus the equivalent forced outage rate.

So, the 92 to 95 percent is solely the

availability of that unit subtract the planned outages.

CHAIRMAN KEESE: Okay. And unplanned is not in there yet?

MS. ZAMBITO: No.

CHAIRMAN KEESE: Okay. There are peak periods and there are non peak periods. Would you expect that that number is -- the availability is higher during peak periods? Since I think you indicated do your major unscheduled -- major scheduled maintenance during offpeak periods. Would it be a higher factor of availability during peak periods?

MS. ZAMBITO: We strive for that. As a business we try to have all of our units available during peak times, because that's the right business position to be in.

So, in generality --

CHAIRMAN KEESE: Do you have --

MS. ZAMBITO: -- generalities --

CHAIRMAN KEESE: -- an idea how close you come to achieving that?

MS. ZAMBITO: Well, as I said, in another -- if I could talk to you in another year or so, where I have some data, that from Mirant's

operating facilities and competitors don't necessarily share that information with us anymore, but we will also be able to get with utility-regulated entities that are required to report that information. And a lot of utilities do have combined cycles going into operation now.

So, we're monitoring that and I don't have that data available. I can say that with our conventional units we do try to make those units available during peak times, hence the reason for trying to do outages in the spring, so that when peak is necessary, when you have to have the power, your units are as available as possible.

CHAIRMAN KEESE: All right. Let me switch to one thing, although I know we're going to hear about single contingency again, I'm sure, before we're done here.

Are you focusing solely on the condenser, is that what we're down to now? Did I --

MS. ZAMBITO: The steam turbine generator condenser components are all shared in a two-by-one design.

CHAIRMAN KEESE: And that is what our focus now is on?

MS. ZAMBITO: I don't know what our focus is on; I know the ISO has been concerned --

CHAIRMAN KEESE: About that?

MS. ZAMBITO: -- about that area or shared components --

CHAIRMAN KEESE: Again, I'm sure we'll hear from them later, but they -- to say that number one, they'd like that; number two, subject to a determination that that was significant, that that was a significant risk.

Has that been determined by the ISO or are you aware?

MS. ZAMBITO: I'm not aware of. I've read some documentation where they have mentioned the condenser, but I'm not aware that they have determined that that is the --

CHAIRMAN KEESE: Significant --

MS. ZAMBITO: -- single contingency concern.

CHAIRMAN KEESE: Thank you.

MR. WESTERFIELD: Chairman Keese, on behalf of staff, we will address that issue --

CHAIRMAN KEESE: Okay, I --

MR. WESTERFIELD: -- in the ISO testimony.

CHAIRMAN KEESE: -- thought it would be coming up.

PRESIDING MEMBER PERNELL: I just have one follow up; actually, most of my questions have been answered, so my paper's all scratched up.

And that is a follow up with Mr. Ramo's questioning on the difference between the two-on-one design and the two one-by-one design.

And you indicated that the consideration was mostly cost from Mirant's point of view.

MS. ZAMBITO: The two one-by-ones are significantly more expensive than one two-by-one design because --

PRESIDING MEMBER PERNELL: Right, okay, that's fine. My question is was there any analysis done or do you have an opinion on the environmental consequences of the two options?

MS. ZAMBITO: Without doing -- I don't know if we did the analysis of the two one-by-ones because we saw that that's probably not the way we needed to go, so I think we stopped.

My opinion would be that you now -- let me think for a moment -- I don't know. I don't know without looking at the specifics and analyzing it.

PRESIDING MEMBER PERNELL: Would there be an increase in the footprint?

MS. ZAMBITO: Yes.

PRESIDING MEMBER PERNELL: And this might be a question you don't know, but in terms of emissions, the one-by-one design, do you know what the emission rates for a one-by-one design?

MS. ZAMBITO: No, sir, I don't know off the top of my head.

PRESIDING MEMBER PERNELL: Okay. Thanks.

HEARING OFFICER VALKOSKY: Is there anything else for Ms. Zambito? Thank you, Ms. Zambito.

PRESIDING MEMBER PERNELL: Thank you.

HEARING OFFICER VALKOSKY: Any exhibits, Mr. Carroll?

MR. CARROLL: Yes, at this time we would ask the following exhibits be admitted into evidence. Portion of exhibit 1, specifically section 2.4 of the AFC; portions of exhibit 5, which are the responses to CEC data requests 1 through 139 that are identified in Ms. Zambito's prepared testimony.

Portions of exhibit 55 which are the

responses to CEC data requests 162 through 169 identified in her prepared testimony. Exhibit 54, which is her prepared testimony filed on project reliability.

And then the January, what we referred to as the gas supply letter, which I don't believe has been identified with an exhibit number at this point.

HEARING OFFICER VALKOSKY: Okay, I would just note, and we'll assign the -- going on the belt and suspenders theory, we'll assign the letter dated January 19, 2001, signed by Rodney A. Boschee, B-o-s-c-h-e-e, to Mr. Harrer, exhibit 61.

The reason I say belt and suspenders, because at least in my copy of exhibit 9 that letter is contained between pages 23-1 and 24-1.

MR. CARROLL: Yes, and you're right about that. We weren't sure whether it was or not. But it may have been, so we may have it in twice. But it wasn't clear to us whether the official docketed version had that letter attached.

HEARING OFFICER VALKOSKY: Okay, well, again, we'll err on the side of the belt and suspenders and assign it number 61.

Any objection to the admission of those documents?

MR. WESTERFIELD: No objection.

MS. MINOR: No objection.

MR. RAMO: No objection.

MR. ROSTOV: No objection.

HEARING OFFICER VALKOSKY: No objection, they are all admitted.

Mr. Westerfield, do you still want your preemptive -- is your preemptive request for a brief recess still in effect?

MR. WESTERFIELD: Yes, but I might even elaborate on that request a bit. It's getting on noon, and I have several witnesses who got up quite early and they haven't eaten in six or seven hours. So they've asked if they could have a little lunch before they testify, and be in the right frame of mind.

PRESIDING MEMBER PERNELL: Can we go off the record.

(Whereupon, at 11:55 a.m., the hearing was adjourned, to reconvene at 12:40 p.m., this same day.)

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AFTERNOON SESSION

12:40 p.m.

PRESIDING MEMBER PERNELL: Mr. Valkosky.

HEARING OFFICER VALKOSKY: Thank you. We'll resume. Staff's witness.

MR. WESTERFIELD: Yes. Thank you, Mr. Valkosky. What staff would like to do is present its witnesses as a panel, but, of course, have them summarize their testimony in sequence.

So we would first ask Mr. Galleberg to go through his testimony and then subsequently present Mr. Baker's testimony, and certainly have them available for questions as a panel, if that's acceptable.

HEARING OFFICER VALKOSKY: Okay, I think that's a good procedure. Swear the witnesses, please.

Whereupon,

JOHAN GALLEBERG and STEVE BAKER

were called as witnesses herein, and after first having been duly sworn, were examined and testified as follows:

DIRECT EXAMINATION

BY MR. WESTERFIELD:

Q Mr. Galleberg, would you please tell the

Committee who you work for and what job you hold?

MR. GALLEBERG: I'm a Grid Planning Engineer with the California Independent System Operator, the ISO.

MR. WESTERFIELD: And could you please briefly describe your qualifications and areas of expertise?

MR. GALLEBERG: Yes, I graduated from the Norwegian University of Technology and Science in '98 with a master of science in electrical engineering. I have worked for the Midcontinent Area Power Pool, or MAPP, as a reliability engineer. And the last two years I've been with the ISO as a grid planning engineer.

During this time I've worked on the transmission expansion plans for both Southern California Edison Company and Pacific Gas and Electric. Also reviewed numerous interconnection studies for new generation projects. One of these is Mirant's Potrero 7 project.

MR. WESTERFIELD: And would you please explain the role that the ISO played in conducting the analysis that led to its finding that the proposed unit 7 project should be treated as a single contingency when it became operational?

MR. GALLEBERG: Yes. Mirant brought this question to the ISO's attention quite awhile back. I think it was a year ago or maybe even more. And we have been struggling with this question ever since.

The question of whether to consider Potrero 7 as a single or double contingency is important, not only to Mirant and the plant, but also to the California ISO, since this affects the planning and operation of the transmission grid on the peninsula.

Even if other combined cycle plants have already come online in California, Potrero 7 is the first plant that's really brought this question to our attention, since Potrero 7 has a very important location, due to the reliability concern on the peninsula.

MR. WESTERFIELD: Did you prepare and submit the written testimony on the topic of power plant reliability?

MR. GALLEBERG: Yes, I did.

MR. WESTERFIELD: And what was the purpose in submitting that testimony?

MR. GALLEBERG: The purpose of the testimony was to explain why the ISO considers --

of the three electric generating unit that makes up the proposed Potrero 7 plant be a single contingency rather than a multiple contingency.

MR. WESTERFIELD: And could you also briefly explain to the Committee what is meant by single versus a multiple contingency?

MR. GALLEBERG: A single contingency is the same as an unexpected loss of one element in the transmission system. It could be a loss, for instance, of one transmission line or one transformer bank.

A double contingency is an unexpected loss of two elements at the same time. This could be, for instance, the simultaneous loss of two transmission lines or a combination of a transformer bank or a line.

MR. WESTERFIELD: Thank you. And what is the significance for planning and operations of finding that the proposed unit 7 plant would be a single versus a multiple contingency?

MR. GALLEBERG: The ISO grid planning standards that we use to evaluate the impact on the transmission system have different criteria for a single and a double contingency.

Since the probability of a single

contingency on the system is greater than for a double contingency, the single contingency must meet the stricter performance criteria.

The ISO grid planning standards dictates what standard each type of contingency should meet. There should, for instance, not be any emergency overloads after either a single or double contingency.

One difference between a single and a double contingency is the criteria allows for control loss of load after a double contingency, but not after a single contingency.

So Potrero 7, if it was classified as a double contingency, and we lost the entire plant, control load shedding could potentially occur since it is allowed according to the criteria we use when we operate the system.

When it comes to the planning of the transmission system on the peninsula, we have a special generation outage standard. This is due to the existing generation of the peninsula is very old and unreliable.

So the standard for the peninsula dictates that the single largest generator is unavailable in the basecase when we do planning

studies, we remove it from the basecase so we consider it unavailable.

Today the single largest generator is Potrero 3, which is 207 megawatt. After Potrero 7 comes online, and since it will be classified as a single contingency, the single largest unit will become Potrero 7, 540 megawatts.

According to the criteria we use today this unit will have to be assumed unavailable for planning studies, but we would get Potrero back since this unit will no longer be the single largest unit. Which again would mean a net increase in load serving capability of 207 megawatts, equal to the size of Potrero 3.

If Potrero 7 were classified as a double contingency, the single largest contingency on the peninsula would be half of Potrero 7, or 270 megawatt. So in this case, after taking one-half of Potrero 7 offline, the net increase in load serving capability will be Potrero 3 plus the other half of Potrero 7, which will be 477 megawatt all together.

So, to summarize, for planning studies with a net increase in load serving capability of 207 megawatt, if Potrero 7 is classified as a

single contingency, and if it's classified as a double contingency the net increase in load serving capability would be 477 megawatts.

So, this is important to us since the load serving capability of the generating units on the peninsula again affects the need for new transmission lines and other system enhancements in the future.

MR. WESTERFIELD: So in light of what you just said, if power plant generation on the peninsula were modernized and became more reliable, is it possible that the ISO could relax San Francisco Peninsula special grid planning standards?

MR. GALLEBERG: That could occur, but I don't think I should speculate whether that will happen or not. But, I just talked about the standards as they are today. But they could potentially change in the future.

MR. WESTERFIELD: And a factor in that change, would it not, would be the state of generation on the peninsula, whether it was upgraded or modernized?

MR. GALLEBERG: I think that's just speculation at this point, because the standards

are developed by the ISO with stakeholder inputs from the utilities, from generators, from other people. So, I can't really tell how it will look in the future. But that's how it is today.

MR. WESTERFIELD: Okay, I understand. Before summarizing the substance of your testimony, would you please describe the scope of your testimony today? And by that I mean address in general terms what subject matter you've included within your testimony and what you've not included.

MR. GALLEBERG: Yeah, as I said earlier, the main purpose with the testimony on power plant reliability is to explain that the ISO will treat Potrero 7 as a single contingency when it comes online.

The ISO has earlier filed testimony under local system effects where we have pointed out some of the major benefits, as we see them, from Potrero 7. We have not repeated this in the testimony under power plant reliability, which I would like to say just that the ISO does support Potrero 7. I would think the system will really benefit from this plant, and the system will become more reliable after the plant comes online.

MR. WESTERFIELD: Could you explain to the Committee, please, the standards on criteria the ISO has used to classify the reliability of the proposed unit 7 facility for planning purposes?

MR. GALLEBERG: Since the ISO grid planning standards does not say how to classify an outage of a combined cycle facility of the kind at Potrero 7, we used the probablistic criteria to help us instead of -- this probablistic criteria has been used in the past to reclassify elements in the transmission system based on actual operating history.

The loss of one single transmission line is, as I said earlier, considered as a single contingency under the deterministic planning criteria. And it must meet a certain performance criteria.

But, according to the probablistic reliability criteria, if the line has a very good operational history, which means it's very reliable, it could be reclassified according to this criteria to meet the same standards as a double contingency.

The outage frequency for a -- this could

also go down the way that two lines would -- reliability record could be classified as a single contingency according to the probablistic reliability criteria.

And the outage frequency according to this probablistic reliability criteria is one failure very three to 30 years for a double contingency. And if the failure happens more often than once every two years in average, it should be considered a single contingency.

MR. WESTERFIELD: All right. So, in other words, according to the criteria, to be considered a double contingency it can fail -- generation could fail for no more than once every three to 30 years, is that correct?

MR. GALLEBERG: That's correct, yes. In the case of Potrero 7 that means the combined failure of the entire plant cannot happen more than once every three to 30 years.

When I say fail, I should maybe define that. That means an event that forces all the three generating units of the plant to zero megawatt.

MR. WESTERFIELD: All right. Now that you've explained the criteria the ISO uses in

evaluating the reliability of new combined cycle facilities, would you please explain how you applied this methodology in analyzing the reliability of the proposed unit 7 plant?

MR. GALLEBERG: Yes. The first approach was to try to analyze each of the critical components of the plant. We looked at, for instance, the reliability built into the operation of the gas and steam turbines. The redundancy; number of different pumps, and the redundancy in the control system. We also looked at the condenser and other critical components.

As you know, Potrero 7 has a single condenser. And if the condenser fails the plant cannot operate. However, we think that the probability for an outage of the condenser that forces the plant to zero megawatt is sufficiently small, so we would not classify the plant as a single contingency based solely on the condenser design.

But what we -- figure out when we tried to analyze this data was that these combined cycle facilities are very complex machines, and very hard to estimate any combined failure rate based on the information we had.

In addition, theory and practice are sometimes two different things. So, our second approach was to look at actual operating experience with other combined cycle units that are operational today. And then compare the design of these plants to Potrero 7.

We realize that none of these plants are identical due to the complexity of the plants, but some of them are fairly similar to the proposed Potrero 7.

Also, the amount of operating experience we have is limited due to the fact that these kinds of combined cycle units are fairly new.

The ISO collects and stores information about each generator's forced outages. And we have also visibility of the plants, so we can see, for instance, when, how much megawatt each generator puts onto the system.

We use this information to create a performance record for each of the existing combined cycle plants that are similar to Potrero 7 to get a picture of how reliable these plants really are.

MR. WESTERFIELD: Okay, so now that the ISO's concluded the proposed unit 7 is a single

contingency plan, would you explain to the Committee the basis of the ISO's thought?

MR. GALLEBERG: The plant in California today that is most similar to Potrero 7 is the Calpine's Los Medanos Plant. Also Los Medanos is a two-on-one configuration, two gas turbines and one steam turbine. Both are of the GE7FA type. And both plants have 100 percent steam bypass capability. And we could not find any major differences in the redundancy of, for instance, pumps or control system.

And our records shows that since Los Medanos became operational on August 23, 2001, they have lost the entire plant five times. Actually six times because the plant tripped once last week, too.

Six times has this plant been forced to zero megawatt, during less than two years operating experience. And five of these incidents have happened after the plant had been operational for nine months.

And as you recall, this exceeds the probablistic criteria for double contingency, as I said that a double contingency should only happen once every three to 30 years, on average.

Also none of the other combined cycle facilities besides Los Medanos have a performance record that indicates that they should be classified as double contingencies.

So what I'm trying to say with this data is that Potrero 7, I'm not trying to compare them directly in saying that Potrero 7 will become as unreliable as Los Medanos, but today we don't have any good operating experience, or operating experience that says that they should be classified as a double contingency.

So, that's what our experience has told us, so far, that single contingency is the right classification for these kinds of plants.

And the ISO's main responsibility is, as you know, to operate the electric grid in a reliable way. And considering Potrero 7's location on the peninsula, which is an area today that has significant reliability concerns, the ISO cannot take the risk of having this plant as a double contingency based on the information and experience we have to date.

The ISO has, therefore, no choice but to classify also Potrero 7 as a single contingency. In the future, after some years of operating

experience of Potrero 7, if the plant really turns out to be a very reliable plant, unlike any other we have seen so far, we could potentially reconsider the position and have it classified as a double contingency. But the plant has to prove to us that it is reliable first.

MR. WESTERFIELD: Thank you, Mr. Galleberg. Do you have any other comments that you would like to add to your testimony at this time?

MR. GALLEBERG: No.

MR. WESTERFIELD: Okay, so those are all the questions we have on direct for Mr. Galleberg.

HEARING OFFICER VALKOSKY: Do you intend to proceed with Mr. Baker now?

MR. WESTERFIELD: I would if we could do that expeditiously, unless the Committee has any questions.

CHAIRMAN KEESE: I do have a question. I don't know exactly when it's appropriate, but since your testimony brings it to the fore, let me ask this question.

You were indicating that there is a need for additional power generation in this area.

MR. GALLEBERG: Right.

CHAIRMAN KEESE: Have you quantified what that need is?

MR. GALLEBERG: In terms of megawatt?

CHAIRMAN KEESE: Yes.

MR. GALLEBERG: No. No.

CHAIRMAN KEESE: So a plant is needed. And if it comes in at 250 megawatts it would be needed, there'd be no problem?

MR. GALLEBERG: That's correct.

CHAIRMAN KEESE: And if it comes in at 350 it would be needed and there's no problem?

MR. GALLEBERG: Yes.

CHAIRMAN KEESE: But if it comes in at 540, there's a problem?

MR. GALLEBERG: No, it will still be needed. What I'm talking about here is how to classify it. We need the megawatts but the plant needs to be classified correctly.

CHAIRMAN KEESE: As soon as it gets to that level then steps have to be taken to assure what would happen if it went down?

MR. GALLEBERG: Right. We need to plan for the --

CHAIRMAN KEESE: You need to plan for that?

MR. GALLEBERG: Exactly.

CHAIRMAN KEESE: But that doesn't influence your opinion about whether the plant's needed?

MR. GALLEBERG: No.

CHAIRMAN KEESE: So it doesn't matter, the need is there if it was 250, the need's there if it was 540?

MR. GALLEBERG: That's correct.

CHAIRMAN KEESE: This is not a redundant plant?

MR. GALLEBERG: No, it's not.

CHAIRMAN KEESE: Okay, thank you.

PRESIDING MEMBER PERNELL: On that same topic, if there isn't any planning done so far for Potrero 7 and the single contingency designation, help me understand what happens, I mean in the planning stage do you have to plan for the area to make up that generation?

MR. GALLEBERG: What we plan, we only control the transmission system and not the generation. So we will pretty much take the generation we have and then plan the transmission of basically what generation we have.

PRESIDING MEMBER PERNELL: Right, but if

hypothetically Potrero 7 fails, -- if Potrero 7, for whatever reason, fails or trips off, in terms of reliability is there -- does that designation indicate that they have to be a adequate or a makeup amount of megawatts?

MR. GALLEBERG: If -- we need to plan the system so the system can withstand the loss of Potrero 7.

PRESIDING MEMBER PERNELL: But you haven't done that yet?

MR. GALLEBERG: Yes, that's part of the planning studies to look at what happens if you lose the unit. You need to have enough load serving capability to serve all their load without that unit online.

PRESIDING MEMBER PERNELL: Have those studies -- are they completed?

MR. GALLEBERG: That's part of the interconnection studies, and that has been completed, yes.

PRESIDING MEMBER PERNELL: And is there sufficient megawatts?

MR. GALLEBERG: With all the existing generation in place, yes. And also with new transmission project currently planned, it will be

enough.

PRESIDING MEMBER PERNELL: Okay, thank you.

HEARING OFFICER VALKOSKY: I just have two real quick questions before we get to Mr. Baker.

Mr. Galleberg, you talked about the outages in the three to 30 year period. Does the duration of the outage during that period have any influence?

MR. GALLEBERG: We're not so concerned about the duration as the frequency.

HEARING OFFICER VALKOSKY: Okay, so if we have a one-hour duration as opposed to a 48-hour duration, would that be factored in the same?

MR. GALLEBERG: We would prefer, of course, the one-hour duration, but that's not the critical point because then we would have the time to bring additional generation online.

HEARING OFFICER VALKOSKY: Okay, so that's --

MR. GALLEBERG: It's more the frequency is the important --

HEARING OFFICER VALKOSKY: More the frequency. Okay, thank you. And the last

question before we get to Mr. Baker, who influences the ISO, or who determines the planning criteria for the ISO? I mean is that just something that the ISO does independently, or is it something, for example, if the Energy Commission said, no, this should be a double contingency plant, that you would have to do it that way?

MR. GALLEBERG: The ISO has the planning standard committee which is chaired by ISO, but which has all representation from different utilities, and it's basic level stakeholder forum, so whoever wants to influence those decisions and the standards can attend those meetings.

HEARING OFFICER VALKOSKY: Okay, but the decision based on all this input is an ISO decision?

MR. GALLEBERG: I mean if you have the criteria it's just to follow the criteria.

HEARING OFFICER VALKOSKY: Okay, what I'm trying to get at is if someone wanted to change the criteria, okay, so as I understand it, you'd go to a meeting.

MR. GALLEBERG: Right.

HEARING OFFICER VALKOSKY: You'd give

your input.

MR. GALLEBERG: Exactly.

HEARING OFFICER VALKOSKY: Okay. After that someone's got to decide whether or not to accept your input. And that's my question, who makes that decision as to what the planning criteria are?

MR. GALLEBERG: That's the group all together. So if you're alone in your opinion then it's not going to happen likely. But if you get a majority in the group, --

HEARING OFFICER VALKOSKY: Okay, so it's a majority vote of the --

MR. GALLEBERG: I think that's how it works. I'm not sure about the details, but it's a stakeholder forum where you try to get a majority for the decisions.

HEARING OFFICER VALKOSKY: Okay. So it's basically a consensus process, then, rather than something that's imposed by --

MR. GALLEBERG: Right.

HEARING OFFICER VALKOSKY: Right. Good, thank you.

MR. WESTERFIELD: Thank you.

Now I would like to address some

questions to Mr Steve Baker on behalf of staff. He will address his comments and sponsor testimony which is the amended testimony that we circulated today.

To some extent it's unfortunate that we came here at this late hour and had to present amended testimony, and I apologize for any inconvenience that provides, but as you can understand from what has come out today, we had a process, I think, that was originally started by Mirant. ISO responded as quickly as they could to the questions presented. Then it became apparent that it would be useful for ISO to explain what they said in response to what Mirant asked.

And so now the staff has some continuing thoughts based on what the ISO has said. So, that gave rise for the need to present some amended testimony.

HEARING OFFICER VALKOSKY: Okay, so is it your intention that the document, the power plant reliability testimony of Mr. Henneforth and Baker replace the existing section in the FSA?

MR. WESTERFIELD: Yes, it is.

HEARING OFFICER VALKOSKY: Thank you.

PRESIDING MEMBER PERNELL: Excuse me,

the amended portion is underlined?

MR. WESTERFIELD: Yes, it is.

PRESIDING MEMBER PERNELL: Is that the way it is? Okay.

MR. WESTERFIELD: We've provided the underline/strikeout version, but I think in the end we'll file a clean copy as part of the record.

MR. RAMO: Could I ask a question of clarification? Is there no witness sponsoring the portion of the testimony that's not new?

MR. WESTERFIELD: I'm sorry, I didn't --

MR. RAMO: Is there no witness today sponsoring the testimony under power plant reliability that is not new?

MR. WESTERFIELD: No. Mr. Baker is sponsoring all the testimony.

MR. RAMO: Okay, just wanted to be clear on that.

HEARING OFFICER VALKOSKY: Yeah, as I understand, this is a replacement of the existing FSA section.

DIRECT EXAMINATION

BY MR. WESTERFIELD:

Q Mr. Baker, could you tell us please what your position is with the CEC?

MR. BAKER: I'm a Senior Mechanical Engineer and I lead the Facility Design Unit in our Engineering Office.

MR. WESTERFIELD: And could you briefly summarize your qualifications?

MR. BAKER: I have a bachelor of science degree in mechanical engineering; an MBA; I'm a registered mechanical engineer in California. I have over 28 years experience in the electric power generation field, including mechanical design, QAQC, construction, startup, business development and licensing of nuclear, coal-fired, hydroelectric, geothermal and wind power plants. And I've worked on the engineering and policy analysis of thermal power plant regulatory issues.

MR. WESTERFIELD: And what's been your role in preparing the staff's amended testimony on power plant reliability?

MR. BAKER: The testimony prepared in the published FSA was prepared under my direct supervision. And then I have provided the amendments that you see before you today.

MR. WESTERFIELD: And can you swear that this testimony, the entire testimony, is true and correct to the best of your knowledge?

MR. BAKER: Yes.

MR. WESTERFIELD: Fine. And could you please summarize the principal findings of staff's analysis?

MR. BAKER: There are no specific LORS that apply to power plant reliability, so in the absence of such benchmarks we traditionally choose to compare the likely reliability of the proposed project with the reliability of other power plants that serve the grid.

If the proposed project is not significantly less reliable than other power plants, then we can assume that reliability of the grid will not be compromised by adding this project.

Mirant proposes to build unit 7, employing customary industry measures of quality assurance and quality control. The project does not lie in a flood plane, and it will be built to the most stringent seismic design standards.

We have concluded that natural gas fuel will be available in adequate supply. And as I understand the project to be currently configured, San Francisco Bay would provide an inexhaustible supply of cooling water.

The project will exhibit high reliability due to several planned features. They'll use modern generating equipment that's been on the market now for several years.

They'll use a two-on-one combined cycle arrangement in which either gas turbine generator or HRSG train cannot continue to operate if the other one fails.

They'll incorporate 100 percent steam bypasses from both HRSGs to the condenser, which would allow one gas turbine train to continue operating if the other fails. Excuse me, in the event of a steam turbine failure both the gas turbines could operate if the steam turbine fails.

They plan to incorporate some redundant examples of critical pieces of equipment. The AFC lists two 100 percent capacity condensate pumps, three 100 percent capacity air compressors, and three 50 percent capacity fuel gas compressors.

Also they described how they'll implement a maintenance program typical of the power generation industry.

Given those features we believe the project could equal the level of reliability typical of power plants. But with the added

redundancy suggested by my amended testimony today, I believe the project could clearly equal and probably exceed reliability to power plants currently on the grid.

MR. WESTERFIELD: And continuing that thought, Mr. Baker, could you elaborate, please, on the amendments that you made that are underlined in the copy presented to everyone today?

MR. BAKER: Well, if you turn to the final page, page 8, I think it's summed up with the proposed condition of certification reliability-1.

As suggested in this condition that Mirant be required to design the project to include certain redundancies in critical equipment; that they include the 100 percent capacity steam bypass and both HRSGs to the condenser, as enumerated in the application.

That they use titanium for the condenser tubing to minimize the chances of condenser tube failure. That they use a double flow steam turbine exhausting into a fully bifurcated condenser. This is a condenser with a separating wall down the middle so that if there is a tube

failure, it's likely that they'd be able to continue to operate the steam turbine in part load while they repair the tube failure in the other half of the condenser.

That they install three 50 percent capacity boiler feedpumps per HRSG, or two 100 percent capacity pumps per HRSG, rather than the two 50 percent pumps enumerated in the application. And that they install three 50 percent capacity circulating water pumps instead of the two that are listed in the application.

With the inclusion of these redundancies, we feel that this power plant would clearly equal the reliability of any other two-on-one combined cycle plant being built today.

MR. WESTERFIELD: Thank you. A couple of other particulars. Is it your understanding that the City of San Francisco has agreed to provide adequate potable water for process and sanitary uses or needs of the facility?

MR. BAKER: That's our understanding.

MR. WESTERFIELD: And does the proposed design adequately deal with natural hazards to power plant reliability such as earthquakes?

MR. BAKER: Yes.

MR. WESTERFIELD: So, in conclusion would you say that this plant is likely, with the amendments that you propose, likely to be built to typical industry norms for reliability?

MR. BAKER: Yes. What I've proposed here is the current top of the mountain, as in combined cycle construction. Several of Mirant's competitors are building plants to this sort of design. And it's as good as it gets.

MR. WESTERFIELD: All right. That's all the questions I have.

CHAIRMAN KEESE: These additional design criteria will not impact the ISO's decision on single contingency?

MR. BAKER: I would not expect it to, no, sir.

CHAIRMAN KEESE: So, without these changes you don't -- your feeling is that the plant, as designed, does not meet industry norm?

MR. BAKER: The plant, as --

CHAIRMAN KEESE: Is lower than industry norm?

MR. BAKER: The plant proposed in the application, by my reading of the application, and Ms. Zambito's testimony today contradicted that a

little bit, is not up to the norm of some of the other developers building plants today.

The redundancies listed in my proposed conditions of certification are incorporated, for instance, in all of Calpine's projects. And some of their competitors, also.

So with --

CHAIRMAN KEESE: I'm sure we're going to hear a discussion --

MR. BAKER: -- proposed conditions -- oh, yes.

CHAIRMAN KEESE: -- and I don't want to divert here, but I'm trying to set the foundation for the baseline here. The standards, as I read your testimony, what you're looking for is something that does not deteriorate the reliability of the grid.

So anything that is built to operate higher than the current grid reliability is acceptable, I thought I read.

MR. BAKER: Equal to or greater than.

CHAIRMAN KEESE: Okay.

MR. BAKER: The --

CHAIRMAN KEESE: And what you're saying, I'm just asking the simple question, does what the

applicant propose to build rise above that standard or below that standard?

MR. BAKER: I believe the proposal in the application barely meets the standard. And if it were in a noncritical area, somewhere other than the peninsula, I don't believe we'd be concerned with it. But because there is --

CHAIRMAN KEESE: Okay, so you're suggesting that it be a little more gold-plated, not that it's deficient, but that it could be better?

MR. BAKER: Yes, sir.

CHAIRMAN KEESE: And we'll hear from the applicant whether that's acceptable or you're out of your gourd.

MR. BAKER: Yes, sir.

CHAIRMAN KEESE: Okay.

MR. BAKER: With the suggested additions the plant would be as reliable as anything being built today.

CHAIRMAN KEESE: Thank you.

PRESIDING MEMBER PERNELL: Mr. Baker, just a follow up on Commissioner Keese's question. Does the standard depend on geographical areas, or is the standard a state standard?

MR. BAKER: It's just a big nebulous industry, quote "standard" unquote. There's nothing written down and published and certified and accepted by the decision-making body. It's just what everyone in the business does. What everybody knows.

We're not talking about specific geographic locations because a lot of these designs are being built all over the world. If the developer feels it's worth the extra money to build in these reliability features, then he builds them in, whether it's in California or some other state or some other nation.

PRESIDING MEMBER PERNELL: Right, and perhaps the word standard has me a little confused, when we set policy we set a standard and that's it. So maybe practice would be a better terminology.

MR. BAKER: Yes, sir, or custom.

PRESIDING MEMBER PERNELL: Let me just ask you about there's been some testimony about Los Medanos. Does Los Medanos have your suggested changes?

MR. BAKER: Yes, sir. Calpine bought the certification from Enron and then went about

redesigning it. Several amendments have gone through on process and I believe you've approved some of them, bringing the plant up to Calpine's standards, which include the reliability features that I've listed in my amended testimony.

PRESIDING MEMBER PERNELL: I'm sorry, I didn't hear that. Which includes your recommendations for the Potrero 7?

MR. BAKER: Yes, sir. Calpine's pretty rigorous about dialing their own corporate standards into all their power plants.

PRESIDING MEMBER PERNELL: All right, so I've also heard testimony that Los Medanos has been down at least six times. So, your recommendation for reliability, if it's the same as Los Medanos, brings into question, at least in my mind, the reliability of the facility.

MR. BAKER: The answer to that is going to take a few minutes. May I?

PRESIDING MEMBER PERNELL: You want us to go off the record?

MR. BAKER: No, no.

PRESIDING MEMBER PERNELL: Oh. Please.

MR. BAKER: Okay, with these large multiple train combined cycles, the two-on-ones,

the three-on-ones, we're dealing with essentially a new technology. Many of the components are new. These large Frame 7F gas turbines are new.

The heat recovery steam generators, the HRSGs, are also new. They look a lot like a boiler. Many of the power plants on the peninsula and elsewhere -- use steam boilers. But they act differently.

The industry that builds the HRSGs, it's the same folks that build the boilers. They've been building boilers since before anyone in this room was born. And they know what they're doing.

But they're learning that HRSGs behave differently. The HRSG sees different demands than a boiler does. One of the chief differences is that because of many of these combined cycle plants are cycled on and off weekly or even daily, the HRSGs go through many many more heat-up and cool-down cycles than a boiler typically sees.

And this puts stresses on the machine that designers are only learning to deal with. So we have new gas turbines; we have new HRSGs.

The steam turbines to date so far have been pretty much traditional, although now the manufacturers are starting to dial in some new

redesigns to them, larger, three-dimensional -- stage blades and such for more efficiency. And that will carry with it, again, the idea of new technology.

So when you put all this together, these power plants are new. And, yes, Los Medanos has been online for a year and a half. Calpine's Sutter project went online I think a little bit before that.

There are maybe half a dozen of these projects now operating in California, and more across the nation, but they're still very very new. The plants such as the older ones on the peninsula here have been around, again, since before most of us were born. And they've been shaken out. The people that operate them do know the machines. They've gotten to know how to make them happy; how to keep them running.

These new combined cycles are a different animal. Now, in time, whether it will be a couple of years or a few years or many years, in time the industry will learn all the bugs and quirks of these new combined cycles, the gas turbines, the HRSGs, the rest of the equipment. And they'll learn how to make them happy and keep

them running.

But for now, there's a learning curve in effect. And, yes, Los Medanos has been down many times. You know, Mr. Galleberg wasn't able to bring thorough and complete information on those trips. But if he did, we could probably look through them and find that some of the trips were caused by minor inconsequential things that will be fixed and will never occur again.

Maybe a computer in the control system was programmed wrong, so that when a certain sensor detected a certain temperature or flow rate or something, the computer mistakenly tripped the plant thinking that it was going to melt down.

These are the kind of things that you learn with experience as you operate the plant. As more and more plant operators operate more and more of these combined cycled, they'll get more and more of the bugs and quirks worked out of them. And eventually I expect that the power plants being built today will be much more reliable than the old ones that are still creaking along after 40 and 50 years.

PRESIDING MEMBER PERNELL: Okay. So your revised testimony and recommendations is more

centered on the reliability of the grid versus the reliability of the facility?

MR. BAKER: No, sir, I will not touch grid reliability. That's way outside my area of expertise.

What I'm proposing here in my amended testimony is to require Mirant to build their plant to the very highest reliability standards of any combined cycle multiple train plant being built in California today.

PRESIDING MEMBER PERNELL: Right, and you know, we're all concerned about reliability, so I appreciate that. But I'm not convinced that it is the very high degree of reliability, given a plant with the same amenities that you're recommending has been down six times.

And I know you gave me a long explanation, and perhaps it would be more comfort to the Committee if we knew what caused those various trips, I think.

MR. BAKER: I would suggest that people with a lot more hands-on expertise than the Energy Commission are, believe me, spending many many hours studying that right now.

People whose dollars are going down the

drain when these plants trip are very very motivated to find out the causes of the problems and to fix them.

We don't have anyone on our staff who can advise you on these things. We don't have that kind of expertise available to you. But I am quite convinced that the industry is working long and hard to solve these problems.

And I very much believe that when they have solved the problems these plants will be the most reliable ones that have ever operated.

PRESIDING MEMBER PERNELL: Okay, thank you.

HEARING OFFICER VALKOSKY: I've got a couple of questions. Mr. Galleberg, if I could refer you to exhibit 57, page 3, and that is Mr. Smeloff's testimony. Specifically response 4, okay.

And to make it real quick what his testimony seems to say is that the condenser plays a key part in the designation as a single contingency plant.

Do you see that? Do you agree with that?

MR. GALLEBERG: Kind of agree with that,

just if the condenser plays -- operate, it's only one condenser.

HEARING OFFICER VALKOSKY: Okay. Now, on page 5 of your testimony, the last sentence on the line, you're talking about a change in condenser design would not eliminate the types of forced outages experienced to date by new combined cycle facilities.

What I would like to know is how important is the condenser operation in this, and what is the Committee to draw from these two apparently different evaluations of the condenser importance.

MR. GALLEBERG: Our decision to treat Potrero 7 as a single contingency is not based on the single condenser design. We think that the proposed design on the condenser is sufficiently reliable, so it could become -- or it could be at double contingency based on the condenser, even if it's only one condenser.

Because as they have said before, you can have tube leaks and you can isolate one-half of the condenser, you can still operate the plant. So the likelihood for a catastrophic failure on the condenser, we think, is maybe once every -- up

to once every ten years. Very low.

So, if you just look at the condenser, isolate it, we think it could be a double contingency.

But what we have based our decision on is the plant, as a whole, not only the condenser, but everything else that can go wrong.

HEARING OFFICER VALKOSKY: Okay, thank you for that clarification. Appreciate it.

Also, in the City and County's testimony, or at least in inference, that the designation of Potrero Unit 7 as a single contingency could affect the potential shutdown of the Hunter's Point unit and Potrero Unit 3.

Do you agree with that?

MR. GALLEBERG: The benefit of the plant, Potrero 7, would be greater if it was a double contingency. But I don't know if I can speculate if that decides whether to shut down Hunter's Point or not.

HEARING OFFICER VALKOSKY: Okay, so in your opinion, -- well, you have no opinion on the effect of it on Hunter's Point then, is that correct?

MR. GALLEBERG: No. I haven't -- in

this testimony.

HEARING OFFICER VALKOSKY: Okay.

MR. WESTERFIELD: And, Mr. Valkosky, we tried to say that that was outside the scope of his --

HEARING OFFICER VALKOSKY: I understand, but it's been -- I just want it clarified, okay?

Okay, and possibly the last question, referring to page 6 of your testimony, Mr. Galleberg, could you flesh out a little bit what you mean by the fourth bullet on that page? The risk for controlled loss of load is significant if Potrero 7 is classified as a double contingency.

MR. GALLEBERG: Yes. The criteria we use today from operating system is that you should be able to lose the most -- or most critical unit and the most critical transmission lines. You should not shed any load, for instance, if you lose both two components, the most critical transmission line and the most critical generating unit.

What the criteria does say -- you have a double contingency of two generating units, then you're allowed, according to the criteria, to have controlled load shed. You don't necessarily have

to have it, but according to the criteria you could have it.

HEARING OFFICER VALKOSKY: In support, Mr. Baker's proposed measures contained in condition reliability-1?

MR. GALLEBERG: When it comes to the reliability of the power plant, that's maybe not our -- or that's not the ISO's expertise.

HEARING OFFICER VALKOSKY: Okay.

MR. GALLEBERG: So I think I'll leave that to him.

HEARING OFFICER VALKOSKY: Fair enough. Thank you. Cross-examination, Mr. Carroll?

MR. CARROLL: Thank you.

CROSS-EXAMINATION

BY MR. CARROLL:

Q Just a couple questions, Mr. Galleberg. Would it be fair to characterize the ISO's conclusion that Potrero Unit 7 is a single contingency as a conservative conclusion based on limited data?

MR. GALLEBERG: Yes, I think so.

MR. CARROLL: Thank you. And just to be clear, I think you stated this earlier but I want to be clear about it, is the ISO supportive of the

approval and development of unit 7 as currently proposed?

MR. GALLEBERG: Yes, we are.

MR. CARROLL: And what are the reasons that the ISO is in support of the project as currently proposed? I realize they may be extensive, and if you could just summarize them briefly.

MR. GALLEBERG: Well, it would increase the reliability of the generation on the peninsula, since today's generation is old and unreliable. So, for one thing, it would increase the reliability of the grid.

And also as I think we pointed out in our testimony on local system effects, it would decrease the losses in the system, since this plant would be located in the area where the load is.

And it would also decrease the need for new transmission facilities in the future, since you add generation.

MR. CARROLL: Okay, thank you very much. We do not have any cross-examination for the CEC Staff witness on this topic. We are prepared to respond to the proposed condition if you want us

to do that now, or we can wait.

HEARING OFFICER VALKOSKY: You can do that now, please.

MR. CARROLL: Okay. And before I do that, one clarification that I want to make is that the prepared testimony filed by Ms. Zambito and the testimony presented today included a number of enhancements relative to the project as proposed in the AFC.

So, her testimony today was about a proposed project that goes beyond, in certain respects, what you see in the AFC. So I wanted to clarify that, including we believe, most of the proposed additions in the new condition of certification reliability-1.

MS. MINOR: This isn't clear, I'm sorry. Does this mean that you are amending the AFC along the line of Ms. Zambito's testimony today?

MR. CARROLL: No, there was --

MS. MINOR: What are you saying?

MR. CARROLL: -- there was some confusion, I think, and Mr. Baker mentioned it in his testimony that there was some conflict between what he saw in the AFC and Ms. Zambito's testimony today.

MS. MINOR: Um-hum.

MR. CARROLL: And some of the elements that were specifically measured in Ms. Zambito's testimony are enhancements that have been made to the project over the two-plus-year period since the AFC was submitted.

MR. RAMO: So you're stipulating to those portions of the condition of certification that were included in her testimony?

MR. CARROLL: Well, I think so. I want to go through each of these to make sure that we under --

HEARING OFFICER VALKOSKY: Well, yeah, I think the easiest way if we just have a common reference, everybody's got the proposed condition of certification reliability-1 in front of them.

Mr. Carroll, if you could just go through the five elements; indicate which ones the applicant has no difficulty with; or which ones the applicant has difficulty with.

MR. CARROLL: Yes, I will. With respect to number 1, we don't believe we have any difficulty with this, but we'd like to propose a wordsmithing change, and confirm that it doesn't change the meaning by the staff counsel.

What we would propose number 1 say is as follows: 100 percent to capacity steam turbine bypass. Delete the words "of both HRSGs to the condenser." We think that's consistent with the meaning, we just think that wording better reflects what is intended.

MR. BAKER: Well, no. The idea is if the steam turbine is not operating then you're bypassing steam from the HRSGs to the condenser. But I can see that you're talking about bypassing around the steam turbine. Okay. All right, I'm sorry, I'm beginning to understand what you're suggesting now.

PRESIDING MEMBER PERNELL: So does staff agree with the change in number 1?

MR. BAKER: Yes, sir. So it would read: 100 percent capacity steam turbine bypass to the condenser.

MR. CARROLL: Number 2 we would agree to do. And I will say this is not something that's in the current proposal, so this is something new presented to us today. We are prepared to do this with the caveat that this would only make sense if the once-through cooling system is utilized. If an alternative cooling system not using saltwater

is utilized, then we would not anticipate including this in the project design.

Number 3, again I think we agree with what's intended, but we would propose some wordsmithing changes. So let me just read what our proposal would be. It would read:

Use of a divided water box condenser, so we would delete the words between starting with "double" through the word "bifurcated", and replace those words with "divided water box." And then the remainder would remain the same.

So it would be use of a divided water box condenser, and then it would continue allowing repairs.

HEARING OFFICER VALKOSKY: Mr. Baker?

MR. BAKER: That would be fine with me.

MR. CARROLL: And we are fine with numbers 4 and 5. And, in fact, those are among some of the enhancements that have been made relative to what was initially presented in the AFC and were described in Ms. Zambito's testimony earlier today.

HEARING OFFICER VALKOSKY: Okay, I have just one minor point of clarification, Mr. Baker. As I understood your testimony for reliability

aspects you analyzed only the proposed once-through cooling, --

MR. BAKER: Yes, sir.

HEARING OFFICER VALKOSKY: -- is that correct? So, based on that, would you agree that the titanium tubing is not required if an alternate cooling system is chosen?

MR. BAKER: It's not as much a requirement as one of those things that it's nice to do. It's extra insurance. Even with fresh water cooling, there will be some chemical attack of the tubing material over the life of the plant. It's up to the developer whether he wants to spend the money for titanium, or whether he wants to look at the possibility of having to replace tubes sometime during the life of the plant.

The titanium may last the life of the plant, or it may not. Anything less than titanium would be liable to require replacement sooner than the titanium. But it's an economic decision, and with fresh water cooling it's probably a good call to say, you know, let the developer decide when he pencils it out.

But for salt water use, I think titanium is clearly --

HEARING OFFICER VALKOSKY: Okay, thank you. And just to finish off this, if, for example, a hybrid cooling system is ultimately proposed, I take it it would be necessary for you to revisit your reliability testimony?

MR. BAKER: Yes, sir.

HEARING OFFICER VALKOSKY: Mr. Carroll.

MR. CARROLL: Nothing further, thank you.

HEARING OFFICER VALKOSKY: Ms. Minor.

MS. MINOR: Thank you.

CROSS-EXAMINATION

BY MS. MINOR:

Q Mr. Galleberg, welcome back if such a thing as welcome under these circumstances.

Do you have a copy of Mr. Smeloff's testimony in front of you?

MR. GALLEBERG: Yes, I do.

MS. MINOR: Would you look at page 4, the response to line -- the response to question 4, which begins on line 7.

MR. GALLEBERG: Line 7 on page 4?

MS. MINOR: That's correct. I'm sorry, page 3, line 7, the response to question 4, response 4. Are you there yet?

MR. GALLEBERG: Yes.

MS. MINOR: Okay. This response is a quote from ISO's local systems effect testimony. The statement that -- and on line 9 I'm quoting: Currently the total outage of Potrero Unit 7 is considered a single contingency because of common mode of failure for the plant has been identified (the condenser)." And then it continues. That is a quote from ISO's local system effects testimony.

Based upon your testimony today, and it was a response to a question from Mr. Valkosky, has your testimony changed? Has your local system effects testimony changed?

MR. GALLEBERG: Yes. Our basis for having it as a single contingency has changed because the local system effects, I believe, was supplied in March this year.

MS. MINOR: That's correct.

MR. GALLEBERG: So, during the last six or seven months we have looked more at operating history and we also have more operating experience now. So we based it on the actual experience we have with existing combined cycle facilities.

MS. MINOR: Will ISO be modifying its local systems effect testimony for this

proceeding?

MR. GALLEBERG: Yes.

MS. MINOR: I don't recall, are you that witness, as well?

MR. GALLEBERG: I'm not on it today, but I think I will be.

(Laughter.)

MR. WESTERFIELD: Thanks for agreeing, Johan.

MR. GALLEBERG: You're welcome.

MS. MINOR: So, Mr. Westerfield, we will expect a modification?

MR. WESTERFIELD: Of course, if and when we get to LSE we'll be there with an amendment.

MS. MINOR: I don't know if you have to wait till you get to LSE to modify it. Okay.

I'd like to just go back and be -- make sure I'm clear about how the planning standards are developed, and who ultimately approves those standards.

I understand that there's this working committee, and that this working committee comes up with a proposal.

Is that proposal then presented to the head of the planning division? Is it approved by

the board of governors?

MR. GALLEBERG: The proposal is presented to the board of governors, so they will have to approve it for it to take effect.

MS. MINOR: So these standards have been approved by the ISO Board of Governors? It's not just this working committee?

MR. GALLEBERG: No, no, it's approved by the board of governors.

MS. MINOR: I understand the scope of your testimony. What I would like to do is to have you apply the San Francisco standards, and help us understand what the practical consequences are if we say unit 7 is a single contingency power plant.

MR. GALLEBERG: Okay.

MS. MINOR: Okay? I think we all conceptually understand what those standards are. What I'd like you now to do is to apply the standard.

So if unit 7 is built, applying the existing standards from a planning standpoint what additional in-City generation is required in order to meet the existing standards?

MR. GALLEBERG: I can tell you how we

perform the planning studies and how we apply the current planning standards.

The system for any planning studies related to the Bay Area or including San Francisco, we would have our model, electronic model of the system. We would remove or take off the single largest unit on the peninsula, which up to Potrero 7 has been Potrero 3.

MS. MINOR: Um-hum.

MR. GALLEBERG: So we'd change the status from one to zero, basically take it offline. And then we run all our contingencies according to the planning criteria.

MS. MINOR: Okay. And my question to you is let's assume that unit 7 has been licensed and built so that unit 7 is now the largest in-City generation in San Francisco.

Tell me what the modeling -- what the effect would be if you took unit 7 off. What additional either generation or transmission would be required in order to meet the planning standards?

MR. GALLEBERG: Well, that depends upon the number of variables.

MS. MINOR: Okay.

MR. GALLEBERG: The load growth. And the transmission projects. And also any other generation projects. Also potentially retired generation that we have to consider.

So, I can't tell you that's how much we need with an exact number because it depends upon so many things.

MS. MINOR: If unit 7 were online today, based upon the in-City generation that exists in San Francisco today, and the transmission projects that are in place today, how would you apply the standards?

MR. GALLEBERG: How I would apply the planning standards on today's system?

MS. MINOR: Yes.

MR. GALLEBERG: I would remove Potrero 3, and then I would run all my contingencies, all the credible contingencies.

MS. MINOR: I think I'm not being clear. What I'd like you to do is to assume that unit 7 is in place today, everything else is as it is today. But in addition, unit 7 is there.

How then would you apply the criteria?

MR. GALLEBERG: I would have to use the criteria we have today, which says remove the

single largest unit from the basecase, which would mean Potrero 7 if it was online today.

And then run all the credible contingencies.

MS. MINOR: Okay, so once you've removed Potrero Unit 7, again this is a hypothetical, we're assuming it's in place --

MR. GALLEBERG: Yes.

MS. MINOR: -- today. Once you remove Potrero Unit 7, then the next largest in-City generation that you would look for from a planning standpoint would be what?

MR. GALLEBERG: Then it would be Potrero 3.

MS. MINOR: Okay. I've got a lawyer sitting here next to me.

Can you --

MR. RAMO: You've got two lawyers --

MS. MINOR: Oh, that's right.

(Laughter.)

(Parties speaking simultaneously.)

MS. MINOR: If you applied the criteria further, okay, so we've got unit 7, assuming hypothetical unit 7 is in place, under the criteria we assume it's been removed, you would

then look for Potrero unit 3.

MR. GALLEBERG: Correct.

MS. MINOR: And then what additional either combustion turbines or transmission would be required under the current planning standard?

MR. GALLEBERG: We have to remove the single largest unit after Potrero 7, which is Potrero 3. In addition, we'd have to remove the single largest and most critical transmission line --

MS. MINOR: Okay.

MR. GALLEBERG: -- which would be the 230 kV cable --

MS. MINOR: Thank you.

PRESIDING MEMBER PERNELL: Can I do a follow up on that? What is the -- if you know, what is the likelihood of something like that happening?

First of all, has it ever happened?

MR. GALLEBERG: I'm maybe not the right one to answer that, but it's a credible contingency that we have in the operating system, so it could happen. But I don't know the operating history of it.

PRESIDING MEMBER PERNELL: And so this

is a contingency plan, I would assume, so do you have any idea the likelihood of it happening? Is that something that you model?

MR. GALLEBERG: I would think it's very low, but we have other incidents happen with, I would think, lower probability, which was -- I think it was in '98 where there was a fault on the San Mateo buss, and I think we lost basically all the lines north of San Mateo up to the Martin substation.

And that, if you look at the criteria, is an incidence with very low probability, yet it happened.

And then we also had load shedding as a consequence.

PRESIDING MEMBER PERNELL: In '98?

MR. GALLEBERG: I think it was June 14, '98.

PRESIDING MEMBER PERNELL: But the contingency worked, I guess, should be my question? It didn't work? We had --

MR. GALLEBERG: We had a more severe contingency than what we operate the system for.

PRESIDING MEMBER PERNELL: Is that -- well, that's all right.

MR. GALLEBERG: You can call it a minus 3 and minus 4 or something like that.

PRESIDING MEMBER PERNELL: All right.

CHAIRMAN KEESE: If we assume that this are of the peninsula is at risk with its current old generators when we're at peak demand, would it be at less risk if Potrero 7 was operating and Potrero 3 was out?

MR. GALLEBERG: No, if we have to choose between Potrero 3 and Potrero 7, that's the question?

CHAIRMAN KEESE: Well, right today. Assuming that today, or you know, when at that rare time in San Francisco we have it -- it's 98 degrees here. Let's assume that day. And we have Potrero 3 along with the peakers servicing the peninsula. We're at risk.

If the proposal were to remove Potrero 3 and put in Potrero 7 and it's operating, is the peninsula at less risk?

MR. GALLEBERG: Less risk.

CHAIRMAN KEESE: Okay, thank you.

MS. MINOR: I have one further question if I may.

Mr. Galleberg, I think you're aware of

the fact that PG&E has filed an application with the CPUC to build the Jefferson-Martin transmission line. You're aware of that?

MR. GALLEBERG: Yes.

MS. MINOR: Okay. Can you help me understand whether the approval, and then the construction of the Jefferson-Martin transmission line, which will allow more power to be imported into the City, if that changes ISO's determination as to how -- if that provides sufficient additional transmission so that your view as to unit 7 being single contingency could change?

MR. GALLEBERG: No, it would not change.

MS. MINOR: It would not.

MR. GALLEBERG: No.

MS. MINOR: Okay. Under the existing planning criteria, if Jefferson-Martin were in place, would that change ISO's determination as to whether unit 3, Potrero unit 3 needs to be in place?

MR. GALLEBERG: And you would have to study that. And the ISO is working on studying that in the future. But I don't think I can answer that question without looking at the power fall --

MS. MINOR: But you are currently evaluating from a power fall standpoint the impact of construction of Jefferson-Martin?

MR. GALLEBERG: Yes, that has been done in the past, before it was --

If I remember correctly, I think the Jefferson-Martin brings in 380 megawatt over load server capability --

MS. MINOR: I have no further questions.

HEARING OFFICER VALKOSKY: Thank you, Ms. Minor. Mr. Ramo.

MR. RAMO: My first questions are for Mr. Galleberg. And then I'll let Mr. Baker have a chance to answer questions.

CROSS-EXAMINATION

BY MR. RAMO:

Q I gathered that in the ISO's planning analysis there are at least two factors of concern for you. One being how many megawatts are available, is that correct, that that's one factor?

MR. GALLEBERG: Yes.

MR. RAMO: And the second is under certain contingencies how many megawatts would be available?

MR. GALLEBERG: Correct.

MR. RAMO: We've been exploring here what if the largest unit went down on a single contingency, is that correct?

MR. GALLEBERG: Yes.

MR. RAMO: Now, from the standpoint of how many megawatts are available, I gather having a project like unit 7, even a project half the size of unit 7, would be preferable to not having any project at all, is that correct?

MR. GALLEBERG: That's correct.

MR. RAMO: From a contingency standpoint, I gather the ISO would prefer to have two units of 150 megawatts each that would represent a double contingency than one single unit of 500 megawatts, is that correct?

MR. GALLEBERG: Either two plants of 150 megawatt each or one plant of 540 megawatt?

MR. RAMO: Just from the perspective of the single contingency.

MR. GALLEBERG: Say that we would prefer two 250 megawatt units compared to one 500 megawatt plant.

MR. RAMO: I have no doubt that you would prefer two 250 megawatts to the one 500

megawatt.

(Laughter.)

MR. RAMO: I'm asking from -- let me try this a different way. Under the way you processed it, as I heard you, correct me if I'm wrong, under the single contingency analysis you say what if this plant goes down and there's zero from it.

If there were two 150 megawatt facilities you'd either say what happens if unit 3 shuts down, or you would say what if one of those units shut down, is that correct?

MR. GALLEBERG: Yes.

MR. RAMO: So, under the single contingency analysis if one of the 250 megawatt facilities went down you'd still have 150 megawatts under your analysis, correct?

MR. GALLEBERG: Yes, but if you have plants of 150 megawatt, Potrero 3 would still be the largest one so we would have to look at Potrero 3 when we look at the contingency analysis.

MR. RAMO: Sure, okay. Okay, I'll make them 225 megawatts --

(Laughter.)

MR. RAMO: You're very smart on this.

You see my point?

MR. GALLEBERG: Yes.

MR. RAMO: That basically at least from the perspective of one or two units, you'd be comparing everything, all the 500 megawatts are down versus some other smaller unit being down.

MR. GALLEBERG: Correct, right.

MR. RAMO: Okay. On the factor of how many megawatts are available, I gather you would prefer more megawatts so long as they were needed to support the system, is that correct?

MR. GALLEBERG: Yes, that's correct.

MR. RAMO: But if they weren't needed to support the system the ISO wouldn't have a reliability concern one way or the other would they?

MR. GALLEBERG: No, we wouldn't.

MR. RAMO: So the big question which I take you can't answer it today, is the question from the Commission, how many megawatts indeed do we actually need to support reliability in the San Francisco Peninsula.

MR. GALLEBERG: How we determine that is during our reliability must-run contracts, RMR contracts. The RMR contracts with those

generators that are needed for local reliability.

So, --

MR. RAMO: But today you don't have an answer for us, here's how many megawatts?

MR. GALLEBERG: No, I don't.

MR. RAMO: Okay. And at this point, as of today, does the ISO have any recommendation to the applicant or the Commission as to how the applicant can avoid a single contingency judgment short of producing two separate units?

MR. GALLEBERG: We think that's very difficult. I think the only way to have it as a double contingency would be to have two separate units.

MR. RAMO: Okay, my next questions I'll address to Mr. Baker, but I'll allow Mr. Galleberg, if you have a comment, certainly add to it.

Mr. Baker, I'm trying to square the amended portions of the staff's testimony with some of the original text. And you may have already clarified this, but I just want to be sure I understand it.

In the first page of your testimony under introduction, near the end there's a

statement to the effect of while Mirant, as the owner of the power plant, has predicted a level of reliability for the power plant, staff believes Mirant should not be held responsible for achieving this goal.

Could you explain how that squares with what I thought your testimony now is, which is that they ought to have slightly better reliability, given the location of the facility?

MR. BAKER: I think this goes to Commissioner Pernell's concern about what is the standard, meaning numerical standard. In the application Mirant said that they hope, they plan, they proposed to build a plant that will, after it's all said and done, turn out to have exhibited availability in the 92 to 95 percent range.

And they probably will end up doing that. Particularly if my proposals here are accepted.

But we don't want to get into a Sherlock Holmes kind of scenario here where we tell them they have to meet this and then we go back every year and look at their generating records and if they've fallen short, if they've generated -- if they've had an availability of 91.5 percent, then

we tell the Commission please penalize them, they haven't done what they were supposed to do, we don't want to get into that.

And that's not what we're proposing to do with our testimony here.

MR. RAMO: To what extent, as the Commission evaluated alternatives, should they judge this facility by what they represent, by the average of the utility industry, the norm of the newer facilities, or the best of the new facilities versus other alternatives?

MR. BAKER: Because of the lack of official numerical standards for reliability, there's no law or ordinance that any of us on staff are aware of that specifies a minimum reliability for a power plant.

Because of that, we've taken this course of examining the proposal of -- the general reliability of the plants on the system, unquote. And we analyzed the project, and if we tell the Commission that we believe this plant will be at least as reliable as the plants that are already out there connected to the grid and supplying electricity, then we would, you know, we're telling the Commission that we believe this plant

is not going to hurt the system.

It may help it, it may keep it the same, but it's not going to hurt it. And it's our opinion that -- reliability, they can certify the project.

MR. RAMO: So would it be fair to say that this statement is in the context of how the Commission should evaluate reliability, but is not meant to be a statement as to how the Commission should compare this alternative with another alternative?

MR. BAKER: I think that's fair to say.

MR. RAMO: Now, just to be clear, since it's been a theme of mine this morning, at the very beginning of the introduction you talk about being built in accordance with typical industry norms.

Is that statement -- was that -- did you explain what you meant by that when you talked about the nebulous world of industry practices? Is that what you really mean by industry norms?

MR. BAKER: Yes.

MR. RAMO: Okay. Now, on page 6.4-2, I guess the second full paragraph there's a discussion about Cal-ISO requirements. Do you see

that section?

MR. BAKER: Yes.

MR. RAMO: And there's a statement that facilities must schedule all planned maintenance outages with the Cal-ISO, do you see that statement?

MR. BAKER: Yes.

MR. RAMO: Apparently that's based on a 1999 communication?

MR. BAKER: Yes.

MR. RAMO: Do you know if that's still true?

MR. BAKER: I've communicated with ISO people and with other Energy Commission Staff who deal with the ISO, and it's my belief that that's still true.

The ISO wants to know about any planned outages. I understand that they don't have approval authority over outages, but they certainly want you to schedule it with the ISO so that they know when they're going to occur.

MR. RAMO: Do you think there would be a value in giving them approval authority?

MR. BAKER: I have no idea. That's outside my area.

MR. RAMO: Do you see any problem in plant performance if they had to schedule and get approval from the ISO for an outage?

MR. BAKER: I can't imagine that there'd be a problem. Power plant owners schedule their maintenance work based largely on the equipment manufacturer's recommendations, the -- other things, like the time of year, perhaps the operating history, how much they've been called upon at that time of year and such. Economics, such things; availability of the maintenance crews that they need.

I can't imagine there'd be a problem, but I'm not the person to ask that question.

MR. RAMO: Okay, let me ask you to turn to page 6.4-4, the discussion about the maintenance program. And in this discussion you refer to a number of specific types of maintenance activities that this facility would have to do under the paragraph maintenance program. Do you see where I'm referring to?

MR. BAKER: Yes.

MR. RAMO: And so one of the items of maintenance is a week to ten days per year offline for various kinds of annual inspections and

cleaning, is that correct?

MR. BAKER: Yes.

MR. RAMO: And then every third year there's a hot gas path inspection lasting up to three weeks, is that correct?

MR. BAKER: Yes.

MR. RAMO: And every sixth year there's a major maintenance that lasts at least four weeks, is that correct?

MR. BAKER: Yes.

MR. RAMO: Now, on the first item you indicate that would occur at low electricity demand. Is that required by anything other than the logic of the business?

MR. BAKER: Not that I'm aware of. It's customary for a power plant owner to schedule their maintenance at the time when they're least likely to be called upon to generate, or when, if called upon, they would be likely to receive the lowest prices for their power.

MR. RAMO: That's if they're in good faith and doing normal business practices, correct?

MR. BAKER: I can't speak to that. I'm just a power plant engineer, nothing more.

MR. RAMO: Okay. Every third year and every sixth year you didn't use the phrase low electricity demand, and I was trying to figure out whether that was a matter of grammar or there was some technical reason why they would not want to do those during low demand.

MR. BAKER: It's implied, I just didn't repeat those words in each sentence. All of the scheduled maintenance would be scheduled, if possible, when it's least likely to impact the economics of the power plant, meaning the times when it's least likely to be called upon.

MR. RAMO: So there would be, as far as you know, nothing impacting either profitability or mechanics or engineering that would prevent them from doing these maintenance activities during low electricity demand?

MR. BAKER: In general. There may be some specific problem. Perhaps the power plant has developed an ailment and it needs to be taken care of sooner rather than later, you know, an uncured problem with the plant could easily change your desire to schedule the maintenance perhaps earlier.

Maybe your condenser is leaking and you

want to get in there and fix the tubes. But you don't want to have a shutdown just for that. So you move up the gas turbine maintenance so it will coincide with the condenser repairs.

Other things like that could affect when you would want to do your maintenance.

MR. RAMO: And that's something that they could easily communicate to the ISO, is that correct? That kind of upset or unpredicted breakage or mechanical breakdown occurred.

MR. BAKER: If it were predictable. If it were predicted and known, I would assume that they could communicate that.

MR. RAMO: And that could easily be demonstrated to an inspector, whether from the Commission or the ISO?

MR. BAKER: I don't know. I haven't put any thought into how you go about inspecting such things.

MR. RAMO: Well, I'm going to ask you to put a little thought in it. If there was an unpredictable breakdown that prevented them from delaying maintenance until there was low electricity demand, do you see any reason why that couldn't be demonstrated to an inspector qualified

to -- qualified in power plant design?

MR. WESTERFIELD: I object to that question. I mean it's very very ambiguous. You're talking about some imaginary defect of thousands of pieces of equipment, and you're asking our witness here today to expound on just how easy it is to describe that to some ISO inspector. We don't even know what it is.

MR. RAMO: Well, somebody with --

MR. WESTERFIELD: It's --

MR. RAMO: -- 28 years of experience in the industry whether --

HEARING OFFICER VALKOSKY: Okay, it's given as a hypothetical. I think it's okay for the witness to respond to the best of his extent.

MR. BAKER: Because I've never put any thought into inspecting outages, I really can't answer. If you let me go back and scratch my head for a month, then I come back later with some thoughts, perhaps I'd have something lucid to offer. But today, on the spot like this, I'm sorry I can't offer anything.

MR. RAMO: Okay. On page 6.4-6 you have a section called comparison with existing facilities. I'll ask you to turn to that. I'll

ask you a question about that.

Do you have that section before you?

MR. BAKER: Yes.

MR. RAMO: It appears that that analysis is based on North American Electrical Reliability Council data from the years 1994 through 1998, is that correct?

MR. BAKER: Yes.

MR. RAMO: So this data doesn't cover the California energy crisis, does it?

MR. BAKER: I don't believe it does.

MR. RAMO: Have you, yourself, made any analysis of reliability during the California energy crisis?

MR. BAKER: No, I haven't.

MR. RAMO: Do you think that would be useful data in determining what the reliability of faculties are during stress conditions like a California energy crisis?

MR. BAKER: No. The reason is the power plant projects that I deal with in my work are all these modern combined cycle plants with very few exceptions.

And there were very very few of them in operating during the crisis. And so I don't think

that their operation or failure to operate would have skewed the statistics much at all.

So I really don't believe that it would be fruitful for me to spend any time looking at those statistics. There just weren't enough of them online to make any difference.

MR. RAMO: How many were online?

MR. BAKER: What month are we talking about here? What month are we talking about?

MR. RAMO: We're talking about the years, let's say the years 2000 and 2001 and 2002.

MR. BAKER: There might have been in California as many as two or three in operation at the time. There could have been -- well, there was Crockett, Crockett Cogeneration. I guess Calpine's Sutter and Calpine's Los Medanos may have been online.

Without looking at some records I really can't say, but I don't think it was a very large number of power plants.

MR. RAMO: Okay, so you don't think the handful of power plants that that data would be useful for this purpose, is that correct?

MR. BAKER: That's right. These NAERC statistics are based on thousands of power plants

over the entire continent.

MR. RAMO: And you don't believe data involving power plants, or these kind of modern combined cycle facilities are useful for this purpose?

MR. BAKER: No, I didn't say that. What I'm saying is, in trying to answer what I thought your question was, is that I don't believe that looking at the power plants that were and were not operating during the crisis would have much bearing on the work that I do, which is chiefly looking at these combined cycle plants.

MR. RAMO: And yet you -- so you don't -- the data of other plants in the crisis years, but you relied upon data for the very same plants during non crisis years, is that correct?

MR. BAKER: What I relied on is the only industry number that I could find, which is the five-year rolling averages that NAERC supplies. And that's the closest I could come to comparing the proposed project with, quote, other facilities, unquote.

After a few more years when some more of these combined cycle plants have been brought online and have developed operating histories and

the developers have seen fit to supply these statistics to the public, then I'm hoping that I'll be able to look at some of these numbers. Maybe NAERC will publish them separately, but --

MR. RAMO: Okay, well, I just want to be clear on this, because I took your answer just then as saying I relied on it because that's all I had, I'd prefer to have other data versus I don't think I should rely on it at all.

MR. BAKER: This section compares -- the existing facilities, is there just to show that we've made some attempt to compare the proposed project with existing power plants in a numerical manner.

Most of this testimony is completely qualitative. This is our one attempt to do something numerical. And unfortunately, the statistics we have available to us don't include many of the kind of power plant that we're dealing with here. And they include a lot of old plants, similar to the ones on the peninsula now.

The new power plants are -- the reliability is very different from the old ones. For one thing, the old ones are wearing out. Now you have some idea what is involved in keeping a

40-, 40-year-old power plant operating. Believe me, it's not easy.

MR. RAMO: Is there an attempt to see if NAERC data is available for after 1998 in preparation of this testimony?

MR. BAKER: Yes. When Mr. Henneforth prepared this testimony, he, in my urging, he looked to see if there were any more current figures available. And there were none.

MR. RAMO: They were not available?

MR. BAKER: That's correct. They may have come out with the '95 though '99 numbers right now, I haven't looked, but for the purposes of what we're doing here, I really don't think it matters. Because that number, that 91.49 percent is not going to change very much.

MR. RAMO: Well, you don't know that because you haven't looked at data for those other facilities for the energy crisis years, have you?

MR. BAKER: I've watched the NAERC numbers throughout the years, and each year when they index, the change is very small because there are so many power plants that make up this number.

MR. RAMO: So it's your position that the California energy crisis did not significantly

impact reliability, is that your position?

MR. BAKER: I do not understand how it could possibly have done so.

MR. RAMO: Have you reviewed the California Public Utilities Commission report on generator reliability during the energy crisis?

MR. BAKER: No, but I've heard other people's reviews of the report. And --

MR. RAMO: So you haven't looked at that data? You haven't looked at any data after 1998? And yet you are positive it makes no difference? Is that what your testimony is?

MR. BAKER: For the purpose of my testimony in this case, I do not believe that it's at all significant.

MR. RAMO: Okay. No further questions.

HEARING OFFICER VALKOSKY: Mr. Rostov.

MR. ROSTOV: I just have a question or two for Mr. Baker.

CROSS-EXAMINATION

BY MR. ROSTOV:

Q I was looking at that same page on comparison with existing facilities, the availability factor is 91.5 percent.

If a plant was available for less than

the 91 percent, would that mean it was not as reliable as the average? I mean would that change your analysis if Mirant's number was 85 percent, for example, availability?

MR. BAKER: Possibly. There are many many other factors, but possibly. But then, again, the numbers that Mirant provided in their application of prognostication, until the plant has been built and operated for many years, we don't know what those numbers are going to be. We're just guessing. And I think they've made a valid guess.

MR. ROSTOV: Right. We've had testimony yesterday, and I know we had testimony in June that Mirant's number is going to be now around -- yesterday, Ms. Zambito was thinking it was around 90 percent. But I'm almost positive that I remember that it was 85 percent availability.

So, assuming that there's a -- hypothetically that there was 85 percent availability for the Mirant plant, would that mean it is not reliable?

MR. CARROLL: I'm going to object to the question because it's based on facts not in the record. Mr. Rostov is confusing availability with

capacity factor, and mixing the numbers together.

HEARING OFFICER VALKOSKY: Mr. Rostov, do you -- well, --

MR. ROSTOV: I don't think I'm confusing them, but I'll just do it as a hypothetical.

HEARING OFFICER VALKOSKY: Do it as a hypothetical, please.

MR. ROSTOV: So hypothetically if the availability factor was 90 percent would that mean this was going to be less reliable than when you compare it to other facilities?

MR. BAKER: If that were the case, it would be very slightly less. But, again, there's a lot of fudging in the numbers. This 91.49 is not as accurate as it looks. It's presented here in four significant figures, but, you know, it's a conglomeration of all the power plants in North America that reported into this system over five years.

And so it's not as precise as it looks. Maybe perhaps we ought to stop putting those numbers --

MR. ROSTOV: Okay, so what if those 85 percent availability, would that make it --

MR. BAKER: I would be surprised if

somebody coming to us with a new power plant proposal predicted an availability factor that low. I'd be surprised.

MR. ROSTOV: Okay, and then you'd say it would be less reliable than the average plant?

MR. BAKER: I might conclude that after finding out why they predicted that.

MR. ROSTOV: Okay.

MR. BAKER: But if they came to me saying that their projected capacity factor was 85 percent I'd say boy you're going to make good money on this plant.

MR. ROSTOV: Okay. Thank you.

HEARING OFFICER VALKOSKY: Redirect, Mr. Westerfield.

MR. WESTERFIELD: I think I have a question. At least one point for Mr. Galleberg.

REDIRECT EXAMINATION

BY MR. WESTERFIELD:

Q I'm afraid -- just a second -- yeah, there were various questions on cross-examination about the possibility of, I guess, reclassifying the plant at some later point as a double contingency. And I just wish you'd go over your thoughts again on that based upon the kind of

experience the ISO or operating data the ISO would like to see in the future in order to make that judgment.

MR. GALLEBERG: If we would be to reclassify the Potrero 7 from a single contingency to a double contingency, the plant would have to show to us that it's a very reliable plant. And very reliable I mean it would take some years, maybe three, four, five, six years at least, have a good record. We can look at the outage data and then have a new discussion if whether to reclassify it or not.

MR. WESTERFIELD: Okay, I think that's all I have.

HEARING OFFICER VALKOSKY: Recross? Ms. Minor?

MS. MINOR: No.

HEARING OFFICER VALKOSKY: Mr. Ramo?

RECROSS-EXAMINATION

BY MR. RAMO:

Q That's one way to avoid the single contingency, but your testimony is also if there were two separate units, that would be another way to address the single contingency, isn't that correct?

MR. GALLEBERG: I haven't discussed the possibility of two separate units in my testimony. I've just the current proposal of Potrero 7, which is that two-on-one configuration. But if you have two separate units it's obviously a double contingency.

MR. RAMO: For the same reason that if you had unit 7, unit 3, then unit 7 would not be a single contingency, correct?

MR. GALLEBERG: No, that's --

MR. RAMO: Thank you.

HEARING OFFICER VALKOSKY: Mr Rostov.

MR. ROSTOV: No.

CHAIRMAN KEESE: Mr. Baker, with the conditions you suggested, which applicant, at least preliminarily, indicated that they were probably not going to have a problem with, has reliability risen?

MR. BAKER: Yes, sir.

CHAIRMAN KEESE: If you put this -- you accepted their guess at 92 to 95?

MR. BAKER: Yes, sir.

CHAIRMAN KEESE: And then you suggested a few more conditions.

MR. BAKER: Yes, sir. Particularly

with the addition of numbers 4 and 5.

CHAIRMAN KEESE: Are we rising toward the 95? I mean, is this a 1 percent rise or a 2 percent, or just insignificant, or what are we talking about?

MR. BAKER: The availability factor, the 92 to 95 percent, is based on predicted planned maintenance, and that's not going to change.

CHAIRMAN KEESE: Okay, you're just saying we'll have fewer unplanned --

MR. BAKER: Surprises, yes.

CHAIRMAN KEESE: -- outages?

MR. BAKER: There's another --

CHAIRMAN KEESE: Significantly or --

MR. BAKER: Well, perhaps, depending on when the outages occur. Availability is a measure of how much the plant has to be down for plant maintenance, for deliberate maintenance.

CHAIRMAN KEESE: Right, so it's a different number?

MR. BAKER: There's another number called reliability factor, which shows how long the plant is down for surprises. And by incorporating the changes I've suggested -- reliability, you would minimize the surprises and

probably drive the reliability number.

HEARING OFFICER VALKOSKY: Anything else for Mr. Galleberg and Mr. Baker? The Committee thanks and excuses the witnesses.

PRESIDING MEMBER PERNELL: Thank you.

HEARING OFFICER VALKOSKY: We can go off the record just for a second.

(Off the record.)

HEARING OFFICER VALKOSKY: Ms. Minor, the City's witness, please.

MR. WESTERFIELD: Mr. Valkosky, --

HEARING OFFICER VALKOSKY: I'm sorry, yes. We have exhibits.

MR. WESTERFIELD: Thank you. Staff would like to move into the record Mr. Galleberg's testimony, which, let's see, I think is dated -- exhibit 56.

HEARING OFFICER VALKOSKY: 56, that's correct.

MR. WESTERFIELD: And we don't have an exhibit number for the amended testimony, since obviously we just --

HEARING OFFICER VALKOSKY: We will assign the amended testimony next number, which is number 62. And that's the power plant reliability

replacement section for the FSA.

MR. WESTERFIELD: Thank you. And we'd move that exhibit into the record, as well.

HEARING OFFICER VALKOSKY: Okay. Objections?

MS. MINOR: No.

MR. CARROLL: None.

MR. RAMO: None.

HEARING OFFICER VALKOSKY: No objections, they're admitted.

MR. WESTERFIELD: Thank you.

HEARING OFFICER VALKOSKY: Ms. Minor.

MS. MINOR: Mr. Smeloff has testified previously, shall we swear him in again?

PRESIDING MEMBER PERNELL: Yes, please.

Whereupon,

EDWARD SMELOFF

was called as a witness herein, and after first having been duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MS. MINOR:

Q Would you please state for the record your name and position with the City and County of San Francisco?

A My name is Edward Smeloff; I'm the Assistant General Manager for Power Policy Planning and Resource Development at the San Francisco Public Utilities Commission.

Q Have you previously testified in these hearings in the topic area of transmission system engineering and traffic and transportation?

A Yes, I have.

Q You have submitted written testimony for the reliability topic area, is that correct?

A That's correct.

Q Do you have any changes or corrections in that testimony?

A No, I don't.

Q And the testimony you are about to give today is a summary of the previously filed written testimony?

A That's correct.

Q Would you briefly summarize for the Committee why reliability is a particular concern to the City and County of San Francisco?

A Reliability is a concern for several reasons. San Francisco, being at the tip of a peninsula has special reliability issues that are different than other parts of the state.

We have transmission that only comes up through one direction, one corridor. And it terminates at the City boundary at a substation, the Martin substation. Then comes into the City from that single point.

Secondly, we have a concern, given the age and the level of forced outages of the existing units within San Francisco; Potrero Unit 3 is 37 years old, and Hunter's Point is 44 years old. Plants of that age tend to be forced out more frequently than new plants.

And then third, we have a reliability concern given the very critical nature of the load that we serve in downtown San Francisco, including the BART system and a number of vital services in the City.

Q Thank you. Commissioner Pernell has questioned the ISO witness about the likelihood of major outages in San Francisco. Can you please briefly describe the 1998 outage? And the cause therefore.

A I was not here. But in 1998 there was a problem at the San Mateo substation, a series of human errors related to various breakers. At that substation we lost transmission in the overhead

system coming into San Francisco, which caused a outage that in many sections lasted for over eight hours during that day in December, and caused millions of dollars worth of economic losses to the businesses in the area.

Q Thank you.

PRESIDING MEMBER PERNELL: And that was human error?

MR. SMELOFF: That was --

PRESIDING MEMBER PERNELL: I remember that now. I was trying to think of the -- I'm sorry to interrupt.

MS. MINOR: That's okay.

PRESIDING MEMBER PERNELL: I was thinking of the northwest line that went down and knocked out part of San Francisco and Sacramento, and I don't think you were here then, either. But I couldn't think of what year that was.

MR. SMELOFF: The planning criteria do take into account both natural causes and manmade causes that can cause a loss of transmission or generation.

BY MS. MINOR:

Q The primary focus of your reliability testimony relates to issues associated with the

single contingency, is that correct?

A That's correct.

Q Okay. Do you recall how the single contingency issue first came to your attention?

A The single contingency issue came to my attention during a meeting that we had organized with Mirant, the ISO, PG&E and with your former boss, Louie Treni (phonetic) of the City Attorney's Office. We were discussing with the parties the planning issues related to coming to a finding and determination that we would shut down the Hunter's Point Power Plant.

It was in the context of those discussions that we understood for the first time, the City, that the ISO was going to treat the unit 7 plant as a single contingency.

That caused concern as to whether the plant, in itself, would allow us to fully retire all of the two operating units at Hunter's Point, as well as enable the phase-out and retirement of unit 3 at Potrero, which is the direction that we'd been given as policy from our board of supervisors in the so-called Maxwell ordinance.

Q Would you be a little bit more specific about what the requirements of the Maxwell

ordinance are, as they relate to the shutdown of the older generating units in San Francisco? Do you need a copy of the ordinance?

A Yeah, that would help for me to refer to the ordinance.

(Pause.)

MR. SMELOFF: The ordinance states what the City policy should be regarding the siting of additional fossil fuel development at Potrero Hill Power Plant.

And it states that any proposal to site a power plant needs to meet a number of conditions. And one of them is that it would result in the reduction of criteria emissions, and it would result in an enforceable agreement to which the City and the power plant developer and PG&E would agree to, that would allow the shutdown of the Hunter's Point Power Plant 90 days from the initial commissioning of the new generation equipment.

It also would result in the binding and enforceable agreement to which the City and County, as a party, which provides that the existing unit 3 shall be used in the least emitting pollution control technology by a date

certain, which shall be no later than 90 days from the initial firing of the generation equipment at the Potrero site.

And it would result in a binding and enforceable agreement requiring the shutdown of unit 3 at the Potrero Hill Power Plant as soon as that facility is no longer needed to sustain electric reliability in San Francisco.

BY MS. MINOR:

Q So those are policy guidelines reflected in an ordinance passed by the board of supervisors?

A That's correct.

Q Okay. Yesterday, during the hearing on the motion to continue, Mr. Carroll asked the Committee to direct the City to meet with Mirant on a continuous basis to resolve some outstanding issues related to the City's support or lack thereof for Potrero unit 7.

MR. CARROLL: Clarification. I asked the Committee to direct the City and Mirant to meet for that purpose.

MS. MINOR: I will accept that point of clarification.

//

BY MS. MINOR:

Q Mr. Smeloff, have you had ongoing meetings with Mirant specifically as it relates to the single contingency question?

A Well, I've had numerous meetings with Mirant and their representatives since I've been in San Francisco for the last year and a half. Besides the meeting I mentioned with the City Attorney's Office and the ISO, we have scheduled regular meetings with Mr. Harrer, Ann Cleary (phonetic), Mr. Karoff (phonetic) and attends these meetings to go over a number of outstanding issues, working together with Mirant.

They include addressing the issue of the single contingency; the issue of the cooling systems; the issue related to the mitigation of PM10 emissions within San Francisco; the issue of coming up with a package of local environmental benefits; and the issue of the timing and nature of any retrofit of unit 3.

Those meetings have occurred almost on a monthly basis, sometimes more frequently than that. And are continuing.

Q Thank you. And let's just conclude by if you would explain to the Committee from the

standpoint of San Francisco what the significance is of the finding that Potrero Unit 7 would be deemed single contingency power plant by ISO.

A Perhaps I can answer that question by doing a hypothetical situation. Let's assume that the unit 7 is constructed and is operating. It becomes the single largest unit in San Francisco. And it is out, as we've heard, it's out for repairs, say for a 28-day repair.

Under that situation the single largest unit available would be unit 3, and the single largest transmission would be a 230 kV line. If you lost the 230 kV line, my understanding from discussions with PG&E of the load serving capability into San Francisco under the existing system would be about 700 megawatts of load that could be served from the existing transmission system.

If you lost unit 3 and Hunter's Point was retired, what you would have remaining to serve load would be three combustion turbines located at Potrero at 52 megawatts each. That would give about 856 megawatts of load serving capability.

It's questionable and something that we

have not yet seen persuasive evidence that the ISO would allow that amount of load serving capability for the closure of all the units at Hunter's Point. Eight hundred and fifty-six megawatts is less than what the peak demand was in San Francisco last year. And depending on load growth, -- even significantly less than what the load could be in 2005 through 2012.

So that is our concern, is that because it is treated as a single contingency unit, that it does not guarantee that, at least to our satisfaction, that both the unit 4 and unit 1 plant at Hunter's Point can be closed.

In addition to that, we think it very likely creates a situation where unit 3 would have to operate under some sort of RMR-like contract as a backup unit to unit 7 for years to come until other resources could be developed for San Francisco.

Q You have a recommended condition of certification. Would you review that briefly for the Committee?

A Yes, our recommendation is that Mirant reconfigure the plant and redesign the plant so that it would not be treated by the ISO as a

single contingency unit.

When we originally wrote this to eliminate the common mode of failure, which had been previously identified by ISO Staff. As I now understand it, they're treating it as a single contingency unit because of their probablistic analysis.

So, we would seek this modification to the condition of certification so that we could achieve a higher level of reliability and not have the plant treated as a single contingency unit.

Q Thank you.

MS. MINOR: I have no further questions.

CHAIRMAN KEESE: I have a clarifying question. Recognizing the sensitivity that you work for the City and you have a resolution there in front of you, in your experience is it likely that within 90 days unit 3 could be retrofitted as you suggested?

MR. SMELOFF: Unit 3 is facing a critical challenge come January 2005.

CHAIRMAN KEESE: I recognize that, but the resolution indicates that within 90 days of when this new unit came on, number 7, the retrofit would take place. Would that -- in my experience,

in my experience --

MR. SMELOFF: That is what the language says --

CHAIRMAN KEESE: -- that's a physical impossibility. But, I don't have the language in front of me. I'm just taking what I thought I heard you read as your number 3 or 4.

Within 90 days of the operation.

MR. SMELOFF: Let me read it again because you are correct, Commissioner. The proposal will result in a binding enforceable agreement to which the City and County of San Francisco is a party, which provides that the existing unit 3 Potrero Power Plant shall be using the least emitting pollution control technology by a date certain, which shall be no later than 90 days from the initial firing of generation equipment for any new fossil fuel generation at the proposed site.

Now, let me just explain how I would interpret that now. Given timing of any development of unit 7, that would be beyond January 2005. So it would be our expectation that if unit 3 were to continue to operate, it would have to retrofit using best available control

technology prior --

CHAIRMAN KEESE: Prior to that?

MR. SMELOFF: -- to the commencement of operation of unit 7.

CHAIRMAN KEESE: And in your experience how long does the unit go out for this kind of activity? Let's say it's SCR or something.

MR. SMELOFF: It would be SCR. We've had conversations with Mirant about the length of time that it would take. My recollection of those conversations with Mirant is they've told us it would take four to five months to do both the SCR installation and repairs of their boilers.

CHAIRMAN KEESE: And that, concerning the current supply situation in San Francisco area, is that a realistic, in your opinion, a realistic scenario that unit 3 is going to go out for four or five months before 2005?

MR. SMELOFF: Well, it's going to either have to do that or come up with an alternative way that it can comply with the state implementation plan for the Clean Air Act.

So it is -- recognize it is a challenge. And it will, one of our concerns is that it does put an additional burden on Hunter's Point to

operate during that period of time when it would be down for repairs, which increases the vulnerability of our electrical situation in the City.

CHAIRMAN KEESE: Thank you.

PRESIDING MEMBER PERNELL: Mr. Smeloff, just a follow up, I guess, on the Maxwell Ordinance. When you first began to quote the ordinance, did I hear you say that the City should do something? I'm trying to understand the verbiage of the ordinance in its beginning.

MR. SMELOFF: It conditions, it says the City shall oppose any application for proposed siting expansion development of fossil fuel power generation at Potrero Hill Power Plant unless --

PRESIDING MEMBER PERNELL: Is that the first page?

MR. SMELOFF: -- the following conditions are met. And then I cited several of those conditions.

PRESIDING MEMBER PERNELL: Right, --

MR. SMELOFF: That's page 2, section 2 of the Maxwell ordinance.

PRESIDING MEMBER PERNELL: All right, let me -- could I see that while I ask you another

question?

Does the ordinance address other potential generation in the City? In other words, it's citing Potrero, but does it address any other?

MR. SMELOFF: No, it does not address the siting of any other power plants, other than those, any at the Potrero site.

PRESIDING MEMBER PERNELL: So that a applicant can come in and begin to build another baseload plant, other than Potrero, and the ordinance wouldn't apply?

MR. SMELOFF: That specific ordinance --

MS. MINOR: I'm sorry, Commissioner, we only have that one copy and I think he needs to have a copy of the ordinance in front of him.

PRESIDING MEMBER PERNELL: Okay, you can have this back.

(Pause.)

MS. MINOR: I'm sorry, Commissioner, would you restate your question.

PRESIDING MEMBER PERNELL: Well, my question is we've been having conversation on the Maxwell ordinance during these proceedings, and my question is whether or not that ordinance will

apply to any other area other than Potrero Hill.

MR. SMELOFF: My reading of the ordinance is that it specifically refers to Potrero Hill Power Plant site in southeast San Francisco.

And if somebody came in with an application at another site, the board of supervisors would have to address that through a separate policy.

PRESIDING MEMBER PERNELL: Okay. And my next question is in your scenario of unit 3 Potrero, the hypothetical you gave, and then you talk about an existing transmission line, so that if -- let's see how you said -- I'm paraphrasing here, but if Potrero Unit 7 goes down, and there's something wrong with unit -- so the double contingency would be unit 3 and a transmission line.

MR. SMELOFF: The hypothetical was unit 7 is out for its --

PRESIDING MEMBER PERNELL: Twenty-eight day maintenance.

MR. SMELOFF: -- 28-day outage, maintenance outage.

PRESIDING MEMBER PERNELL: Right.

MR. SMELOFF: Unit 3 is forced out from operation and then you have a simultaneous trip of the 230 kV line, which is my reading of how you apply the criteria, the ISO criteria for San Francisco.

PRESIDING MEMBER PERNELL: Correct.

MR. SMELOFF: That circumstance you'd have current configuration of the system about 850 megawatts of load serving capability.

PRESIDING MEMBER PERNELL: All right. And so my question is, given that scenario, did you include the Jefferson-Martin line that we have had some conversation about?

MR. SMELOFF: No, I did not include that line. There are a number of very important transmission projects, three of them, which the City is supporting and working together with PG&E to get implemented, Jefferson-Martin being one, although one that's probably furthest out on the time horizon.

The other two being an upgrade of one of the existing lines between San Mateo and Martin from 60 kV to 115 kV. And then very importantly, in terms or reliability, getting a 115 cable built between Potrero and Hunter's Point, and it's

absolutely necessary --

CHAIRMAN KEESE: Commissioner Pernell, could I ask you a quick question before you continue?

PRESIDING MEMBER PERNELL: Yes.

CHAIRMAN KEESE: My understanding would be if you're going to focus on the 28 days, you're talking about six years after the operation starts and we're talking about four years probably before this plant could possibly operate.

So the date you're talking about is ten years from now when this condition might occur. Thank you.

MR. SMELOFF: Assuming that that's the timing of that outage --

CHAIRMAN KEESE: If you're going to talk about the 28 days, that's when you're --

MS. MINOR: That's still a hypothetical.

MR. SMELOFF: Yeah, it's a hypothetical.

CHAIRMAN KEESE: Hypothetical.

MR. SMELOFF: I'm replying to the hypothetical that you set aside the single largest unit and then you apply the planning criteria.

CHAIRMAN KEESE: If we're going to put the hypothetical, let's put it in the time era

we're going to put it in.

PRESIDING MEMBER PERNELL: All right, my only final question is whether or not you took into account the three transmission lines that have additional capacity, I would assume, to import power during your hypothetical.

MR. SMELOFF: Didn't do it in the hypothetical, but we have done -- worked with PG&E and the ISO to actually model what the load serving capability is with those additional transmission lines. And they provide significant enhancements of reliability in the City.

PRESIDING MEMBER PERNELL: Thank you.

CHAIRMAN KEESE: I have one more question. I didn't hear a discussion here, I'm concerned about your mentioning Hunter's Point. I didn't hear a discussion here that the ISO or staff were recommending that Hunter's Point had to stay open if Potrero 7 went in.

I mean, is that a -- that sounds like new stuff to me. There was a discussion of Potrero 3.

MR. SMELOFF: Right. And a concern about --

CHAIRMAN KEESE: But you have a concern

that it might even go beyond that?

MR. SMELOFF: Perhaps Hunter's Point 1, peaking power plant at Hunter's Point. We aren't yet persuaded that under these circumstances you'd be able to retire the peaker at Hunter's Point.

CHAIRMAN KEESE: Well, I would -- I've heard you speak in forums before. I know that San Francisco's trying to get more peaking. I would certainly hope something could replace Hunter's Point peaker. But, okay, so you have a concern here even though it was not expressed by the ISO, that they would have to keep that open?

MR. SMELOFF: Let me just reiterate. We are working with the ISO. We've put together a very collaborative process with the ISO and PG&E to look, to model different scenarios. We are also working to get in, I met with Armando Perez and Gary DeShazo, and we're working to get a memorandum between the City and the ISO to specify specifically what sorts of projects, both in terms of transmission and quantity of generation would be necessary to achieve both the shutdown of unit 4 --

CHAIRMAN KEESE: Did the resolution require the applicant to participate in the MOU on

the shutdown of Hunter's Point?

MS. MINOR: Yes.

MR. SMELOFF: Yes, it does.

CHAIRMAN KEESE: Don't you already have an agreement with PG&E to shut down Hunter's Point?

MR. SMELOFF: We do have an agreement with PG&E to shut down Hunter's Point. What we need now is an understand, an agreement with the ISO as --

CHAIRMAN KEESE: Right.

MR. SMELOFF: -- as to what needs to be in place so they cannot renew the RMR contract.

CHAIRMAN KEESE: Okay, so the applicant is sort of peripheral to this?

MR. SMELOFF: Yes. The applicant is peripheral to this. What we're trying to establish is what quantities, what the transmission projects and quantities --

CHAIRMAN KEESE: Right, I mean I thought that was one thing that was pretty clear, and that's San Francisco wants Hunter's Point down, and has for the last ten years or so.

MR. SMELOFF: Absolutely.

CHAIRMAN KEESE: Okay, thank you.

HEARING OFFICER VALKOSKY: Mr. Smeloff, would you agree that the Potrero Unit 7 would become more reliable with the inclusion of the measures proposed by staff in their conditions of certification?

MR. SMELOFF: I would agree with that. That would improve the operational reliability of unit 7. I think, though, it does not address the issue of whether the plant would be treated as a single contingency by the ISO.

HEARING OFFICER VALKOSKY: It's understood, but it would enhance the reliability?

MR. SMELOFF: Yes.

HEARING OFFICER VALKOSKY: Thank you. Mr. Carroll.

MR. CARROLL: Thank you.

CROSS-EXAMINATION

BY MR. CARROLL:

Q I assume it's safe for me to assume that since you quote from the local system effect study and based on your testimony today, that you are familiar with the contents of the local system effect study that the ISO and the CEC prepared?

A I have read it.

Q I'd like to --

MS. MINOR: Mike, I don't have a copy of it with me. If you have questions about it, you need to give him a copy.

MR. CARROLL: Okay. I do have questions about it.

BY MR. CARROLL:

Q What I'd like to do is just draw your attention to page 6.6-6 of that document. And specifically to footnote 4, which I've just handed you. This is the reference in the document to the ISO determination that the project was a single contingency.

A That's correct.

Q Okay, --

A And it identifies that it had a common mode, failure mode, which is identified as the condenser. And it's my understanding that that testimony now is going to be changed.

Q Okay. But would you agree that based on that reference that when the local system effect study was completed, the ISO was operating under the assumption that Potrero 7 was a single contingency?

A On May 26, 2002, which is the date that this came out, yes. That is my understanding of

how the ISO looked at unit 7.

Q Okay. Just a point of clarification. You said May, I think you meant March.

A March 26th.

Q Okay. If I could take that page back from you. Now I'd like to draw your attention to page 6.6-13, which includes responses to comments on the draft local system effect study.

And at the top of that page is a response to a comment from the City and County of San Francisco which indicates that the local system effects study assumes that Hunter's Point would be shut down when unit 7 commences operation. Do you see that?

A I do see that. It's not specific. It's whether -- it refers to unit 4 and unit 1, including the synchronous condensers.

Q Would you have any reason to believe that the statements, the final LSE analysis assumes the Hunter's Point Power Plant would shut down when unit 7 begins operating would exclude any of the units at the Hunter's Point Power Plant?

MS. MINOR: Mike, would you pass that back to him -- Mr. Carroll, would you pass this

back --

MR. CARROLL: Yes.

MR. SMELOFF: I really don't have a basis for knowing --

(Pause.)

MR. SMELOFF: Yeah, I have this one page here, and it's my understanding that there are additional analyses and comments that have been submitted by the City related to the shutdown of Hunter's Point Power Plant.

BY MR. CARROLL:

Q Well, there were two comments submitted by the City, only one related to Hunter's Point. Here's the other comment.

MS. MINOR: Can I just -- the --

PRESIDING MEMBER PERNELL: Do you want to go off the record for a minute?

MS. MINOR: No, no, I'd like to do this on the record. The difficulty here is that the City filed a 15-page comment document on this section. The staff, for its purposes, pulls out several issues and puts it at the end of its comment section.

So this is out of context. The context is the entire 15-page document that the City filed

with the staff, which were our comments on the local system effect.

So I'm actually going to object to this because it is out of context. We have a document that speaks for itself that was, in fact, filed by the City in response to this local system effect comments.

PRESIDING MEMBER PERNELL: And that's part of the document that speaks for itself?

MS. MINOR: Yes.

MR. CARROLL: Well, my question doesn't, in any way, relate to the other portions of the document. I don't think the context in which it comes up is important.

All I'm asking is that would you agree that in the local system effects study the ISO has stated that it assumes Hunter's Point Power Plant would shut down when unit 7 commences operation.

HEARING OFFICER VALKOSKY: That seems like a discrete enough question.

MR. SMELOFF: But, again, I think there may be some ambiguity as to the meaning of the Hunter's Point Power Plant by the ISO. I think --

BY MR. CARROLL:

Q What reason do you have to believe

there's ambiguity -- Hunter's Point Power Plant?

A One, you have the synchronous condensers, and so I don't know whether that is included in -- a reference to the Hunter's Point Power Plant.

Q Are those part of the Hunter's Point Power Plant?

A It's part of the site where the two operating units are located.

Q Okay, so it's your testimony that the statement by the ISO that the final LSE analysis assumes the Hunter's Point Power Plant would shut down when unit 7 begins operating doesn't necessarily mean that the Hunter's Point Power Plant would shut down when unit 7 begins operating?

A It could mean that the Hunter's Point unit 4, the larger unit, shuts down when unit 7 becomes operating.

Q Let's assume for the moment what I think is pretty clear on the face of the document, that what the ISO means when it says that it assumes the Hunter's Point Power Plant would shut down is that the entire power plant would shut down.

Would that eliminate the concerns that

you raised in your testimony regarding whether or not the determination as to the single contingency nature of Potrero Unit 7 causes any uncertainty about the ability to shut down Hunter's Point Power Plant?

MS. MINOR: I'm going to object to this. The testimony is on reliability. Mr. Smeloff quoted one section of the local system effects testimony in his testimony. That's open game. He can be asked questions about that.

But if he's going to be asked questions about the local system effects testimony, which is not before us today, I'd like the entire testimony to be put in front of him so that it's clear on the record what he's responding to, and what the City has previously said.

We will have ample opportunity to deal with local systems effect when that topic area is taken up.

MR. CARROLL: This issue is squarely in Mr. Smeloff's prepared testimony. At page 4 of his prepared testimony, lines 15 through 18, he states: In addition, whether Potrero Unit 7 is considered by the ISO as a single contingency power plant impacts the ability of San Francisco

to achieve several significant important policy objectives. The first policy objective is the shutdown of all electric generation at the Hunter's Point Power Plant."

What I'm trying to understand is the basis of that statement in the prepared testimony. It was reiterated today in live testimony. In light of the fact that we have a study from the ISO which acknowledges the single contingency nature of the plant, and also states that it's based on the assumption that Hunter's Point Power Plant would shut down.

It seems to me that we have a definitive statement from the ISO which eliminates the concern being expressed in the testimony. And in light of that I'm trying to understand what the basis of the concern is.

MS. MINOR: And --

HEARING OFFICER VALKOSKY: Ms. Minor, this seems to me to be well within the latitude that we've given everyone today.

MS. MINOR: We have had a lot of latitude here --

HEARING OFFICER VALKOSKY: Yeah.

MS. MINOR: -- and I agree with that.

We did not bring the entire local systems effect testimony with us today because it wasn't the topic area.

HEARING OFFICER VALKOSKY: Understood.

MS. MINOR: So I'd like Mr. Smeloff to have an opportunity to take a look at the section in the local systems effect testimony so that his testimony is clear and he's not subsequently subject to --

HEARING OFFICER VALKOSKY: Do you have that section of the testimony with you, Mr. Carroll?

MR. CARROLL: Which testimony?

HEARING OFFICER VALKOSKY: The local systems effect testimony.

MR. CARROLL: I do.

HEARING OFFICER VALKOSKY: Okay.

MS. MINOR: That's --

MR. CARROLL: The only section that I'm referring to is specifically referred to in Mr. Smeloff's prepared testimony --

HEARING OFFICER VALKOSKY: I understand --

MR. CARROLL: I asked him if he was familiar with the document; he said that he was.

HEARING OFFICER VALKOSKY: I understand what --

MS. MINOR: That's fine. I'd like you to put it in front of him --

HEARING OFFICER VALKOSKY: Why don't we take a brief recess, ten minutes. That will be enough time to review it. We can reconvene then.

Okay, if you could, Mr. Carroll, if you could provide Ms. Minor with it.

MR. CARROLL: I'd be happy to.

HEARING OFFICER VALKOSKY: Thank you. We'll reconvene at 3:10.

(Brief recess.)

HEARING OFFICER VALKOSKY: All right, Mr. Carroll.

BY MR. CARROLL:

Q Let me restate the question. In light of the fact that we have a local system effect study from the ISO, which includes two assumptions, the first assumption being that Potrero Unit 7 is a single contingency; and the second assumption being that Hunter's Point Power Plant is shut down, let's assume for the moment that when they say Hunter's Point Power Plant they indeed mean the entire Hunter's Point Power Plant.

What is the basis of the City's concern that the determination by the ISO threatens the shutdown of the Hunter's Point Power Plant?

A I've received the opportunity to review the record here so I can answer the question clearly. Mr. Carroll, on section 6.6-7 of the local system effect it states here that if it is assumed that the Hunter's Point units are retired after the addition of unit 7, hypothetical, then the amount of generation that can be assumed to be operating on the peninsula for grid planning studies is 331 megawatts.

Therefore, because of its design with a credible single point of failure the addition of Potrero Unit 7 decreases the amount of generation that we can assume available for planning the system by 8 megawatts.

So, the analysis that was done shows that there is a deterioration, there's a lessening of the amount of generation that can be assumed available to meet the planning criteria.

So, that raises -- and our comment was that this testimony was vague about how the planning criteria would be applied to the operation or shutdown of Hunter's Point.

And I think it's reasonable to assume that you're going to decrease the amount of load serving capability by these two decisions. It raises the question whether you can shut down both units at Hunter's Point.

Furthermore, on page 6.6-13, they're talking about how the system can be integrated to allow both the operation of unit 7 and Hunter's Point, and it says that the two units can jointly be operated if certain things happen. It says all other overloads can be mitigated with special protection schemes or by accelerating the construction of the Hunter's Point to Potrero 115 cable.

Thus even with Hunter's Point operating, unit 7 can be -- seems to be a word missing -- incorporated into the existing system without significant downstream facilities.

So the analysis here, this local system effects analysis models both how the system can be operated with Hunter's Point continuing to operate, and models it with Hunter's Point removed. It says with Hunter's Point removed there's a deterioration in reliability.

I think that raises a serious concern

about whether or not the ISO will make a policy decision, not just the technical analysis that would allow the closure of both units at Hunter's Point.

PRESIDING MEMBER PERNELL: Did you say 8 megawatts?

MR. SMELOFF: Eight megawatts.

PRESIDING MEMBER PERNELL: Eight?

MR. SMELOFF: Yeah. That would be overall with these two changes, shutdown of Hunter's Point, both units, and the addition of unit 7, because it's a single contingency, you're actually reducing the ability to meet the planning criteria of San Francisco by 8 megawatts.

BY MR. CARROLL:

Q Okay, so let me make sure I understand your question, see if I can paraphrase it. You tell me if I got it correctly.

The basis of your concern that the determination by the ISO that unit 7 is a single contingency might now allow the shutdown of Hunter's Point is based on the decrease in available generation of 8 megawatts?

A Yeah. You're decreasing the available generation; at the same time load is growing. I

think that does raise a concern whether, as a matter of policy, not just analysis, that the ISO would agree to allow for the shutdown of both units.

Not just what's being done in a analysis, to model various "what-if" scenarios.

Q Has the City received any communication from the ISO that would support your concern based on what you see in the local system effects study?

A We haven't received any communication that either supports or doesn't -- or contradicts our concerns. But we are working with the ISO to try to come up with an understanding of -- sources need to be in place to effectuate the closure.

Q Are you aware of any determination by the ISO that if unit 7 were deemed a double contingency that the ISO would authorize the shutdown of both Hunter's Point and unit 3?

A I'm not aware of that.

Q Okay. So as far as you know, even if unit 7 were deemed a double contingency, the ISO might conclude that unit 3 needed to continue to be available, as well?

A That is a possibility.

Q So the determination as to single

contingency or double contingency would have no bearing whatsoever on any decision regarding unit 3?

A Well, it's very hard -- it may be based on what Mirant does to obtain a double contingency. If Mirant were to build two units that were completely separated from one another, rather than continue to operate a single unit, there may be -- and each of those units were equivalent to the size of unit 3, that may enable the shutdown of unit 3.

Q But you're not aware of any indication from the ISO that that would be the case?

A No.

Q I want to ask you a couple of questions following on some questions from the Committee related to the Maxwell ordinance.

You indicated that it was your view that in order to fulfill the requirement of the Maxwell ordinance with respect to the retrofit of unit 3, that the timing was such that that retrofit would have to happen prior to unit 7 coming online, is that correct?

A The ordinance states that it has to happen 90 days after the unit coming online. It's

my assumption from discussions I've had with staff at Mirant, that planning is being done to allow it to take place in a timeframe earlier than the construction of unit 7.

Q Setting aside any discussions you may have had with Mirant, and just based on your own professional experience, wouldn't it have to happen, as a practical matter, prior to unit 7 coming online? In other words, you wouldn't be able to bring down unit 3 and retrofit it with SCR within a 90-day period, would you?

A I think I did say that it was my practical understanding it would occur prior to the construction. I already said that.

Q You've also indicated in your testimony and with reference to the Maxwell ordinance that one of the other policy objectives of the City is the shutdown of unit 3 as soon as that's possible, in essence, is that correct?

A As soon as that can be achieved without affecting reliability, yes.

Q As someone with years of experience in managing generation assets, do you think it's reasonable to expect that a unit would be retrofit with SCR if the plan was to shut that unit down

shortly thereafter?

A I think that there's a choice here, whether to retrofit with SCR or to come up with a plan that would enable the closure of the plant.

I do agree that it is against common sense to expend a large amount of money on improving the asset and then not utilize it.

Q But as a practical matter, as you describe the Maxwell ordinance, and as I understand the ISO's testimony, unit 3 certainly couldn't be taken offline prior to the time unit 7 came online. And if the retrofit is to occur, it must occur prior to the time that unit 7 comes online.

So isn't a party subject to the Maxwell ordinance really in a "Catch 22" in terms of the retrofit of unit 3?

A Well, it may be possible to take unit 3 offline if other resources were developed in San Francisco that would enable it to either be offline for a period of time for retrofit, or to be operated under a different operating protocol.

HEARING OFFICER VALKOSKY: Could I just follow up on that one. Mr. Carroll, correct me, but as I understood your question to Mr. Smeloff

it was more in the nature of the "Catch 22" that you described was, under the Maxwell ordinance, apparently being required to retrofit unit 3 with SCR with the knowledge that it would be shut down as soon as possible. Wasn't that the gist of your question?

MR. CARROLL: That is the question.

HEARING OFFICER VALKOSKY: Okay. Now, Mr. Smeloff, is that your understanding of the ordinance? I think that's the "Catch 22" we're talking about.

MR. SMELOFF: -- read this language very carefully here before answering.

Now, it says, I'll just read it to you. The proposal will result in a binding and enforceable agreement to which the City and County of San Francisco requiring the shutdown of unit 3 of the Potrero Hill Power Plant as soon as the facility is no longer needed to sustain electric reliability in San Francisco and the surrounding area. And after appropriate regulatory approvals further requirement within one year of permanent shutdown the decommissioning of unit 3 of Potrero Hill Power Plant remediation of the site will begin expeditiously.

So it doesn't state a date, but it states that when a determination is made that the plant's no longer needed to sustain electrical reliability, and that the appropriate regulatory approvals are obtained, that it will be shut down.

PRESIDING MEMBER PERNELL: Who would make that determination? In your opinion? I know the ordinance doesn't state that, but --

MR. SMELOFF: The ordinance doesn't state that. I again assume that because the plant is operating on a reliability must-run contract, that it would require a determination by ISO that that contract's no longer needed.

BY MR. CARROLL:

Q What sorts of actions do you believe would have to occur within the City in terms of additional generation development or any other measures before the ISO would be in a position to make such a determination?

A My view is that we would need to construct the cable, the 115 cable between Potrero and Hunter's Point Power Plant so that you could increase the internal City load serving capability.

In addition to that, augmentation and

the upgrade of line 4 between San Mateo and Martin would have to be completed. PG&E is aiming to complete that by June of 2004. That would increase the load serving capability into the City by about 120 megawatts.

In addition to that, we are, at staff level, proposing the development of 150 megawatts of local generation based on three separate independent turbines.

Those, together, would increase the load serving capability and provide diversity of load serving capability to allow the shutdown of Hunter's Point. This still needs to be vetted and reviewed by the ISO.

Q Okay, you said that those together would allow the shutdown of Hunter's Point, but maybe I wasn't clear in my question. My question was what sorts of actions do you think would need to be taken to allow the shutdown of unit 3?

A To enable the shutdown of unit 3 in my judgment, as we've looked at it, would require the development of additional generation, perhaps another 100 megawatts. We are looking at the opportunity to do that at Mission Bay and the downtown Fifth and Jesse plant where we have

existing boilers.

Then in addition to that the construction of the Jefferson-Martin transmission line would be 100 megawatts of new generation and about 380 megawatts of additional transmission capacity into the City.

Q What's the general timeframe within which you think all those actions could be completed?

MS. MINOR: Mike, by all of those you're talking specifically Jefferson-Martin?

MR. CARROLL: I'm talking the items that were mentioned to shut down Hunter's Point, and then the additional items that were mentioned in response to my previous question to shut down unit 3.

MR. SMELOFF: To shut down Hunter's Point the cable between the two power plants and line 4 could be accomplished by the summer of 2004.

The construction of three combustion turbines could be achieved, in our judgment, by the end of 2004.

PG&E's plan for the energizing of Jefferson-Martin is scheduled for September 2005.

And developing the two cogeneration plants would be accomplished by the end of 2006.

BY MR. CARROLL:

Q Okay. So then your suggestion is that if all those measures were to be implemented, unit 3 could be taken offline and the need to retrofit unit 3 would be eliminated?

A Yes.

Q Yes, on page 1 of your testimony you point out that the declining cap that applies to unit 3 requires that the retrofit occur at the beginning of 2005.

A In our discussions with Mirant Staff there has been identification of alternative ways of complying with the Air Quality Management District regulations, which would not require the retrofitting of the plant in 2005.

Q And what sorts of things would those include, or might those include?

A It would include the filing and acceptance of an alternative compliance plan with the Air Quality Management District, and Mirant's obtaining rights to interchangeable emission reduction credits to operate the plants after 2005.

And it would assume the operation of 150 megawatts of alternative generation in the form of three combustion turbines.

Q Would that type of a proposal, in your opinion, comply with the requirement of the Maxwell ordinance that unit 3 be retrofit?

A The Maxwell ordinance, my understanding, requires that unit 3 be retrofitted 90 days after the operation of the commissioning of unit 7.

Q Really --

A Yes.

Q I thought we'd established that in order for that to happen as a practical matter the retrofit needs to occur prior to unit 7 coming online?

A Or alternatively if the plant were retired, with other generation being available, and then unit 7 comes online, and it would be in compliance.

Q But we've also established that the additional generation and other measures that would be required to allow the unit to be retired won't be in place until the end of 2006.

A Right. But what the ordinance requires is that it be retrofitted 90 days after unit 7

comes online. And that -- my estimation is not likely to occur in that timeframe.

Q I'm sorry, I'm not sure I follow that response.

A The ordinance -- you're asking me, the way I'm following the question, you're asking me if the ordinance requires the retrofit of unit 3 the beginning of 2005. And it doesn't. It requires the retrofit of unit 3 90 days after the commissioning of unit 7.

Q Correct, --

A But also if the plant were not operating at the time unit 7 came online, then there would be no argument or no disagreement with the Maxwell ordinance.

Q I don't want to belabor the point, but let me just ask a couple more questions. But as you pointed out in your prepared testimony that the retrofit of unit 3 is not dependent just -- the timing of the retrofit of unit 3 is not dependent just on the Maxwell ordinance. It's also dependent on the declining NOx bubble.

And as you've indicated, the declining NOx bubble requires that the retrofit of unit 3 occur by the beginning of 2005.

A I pointed out in previous questions that there are alternative ways of complying with the NOx bubble reduction other than retrofit with SCR.

Q And my question is if one of those alternative methods was implemented for complying with the NOx bubble, would that also comply with the requirements of the Maxwell ordinance as it applies to the retrofit of unit 3?

MS. MINOR: Do you understand the question?

MR. SMELOFF: I think I understand the question. The question is if Mirant were to comply with state and local and regional requirements on the emissions by doing something other than retrofit prior to the commissioning of unit 7 would that be in compliance with the Maxwell ordinance.

It's kind of out of the discussion or jurisdiction of the Maxwell ordinance. It's a separate way of achieving reductions in emissions and complying with air quality requirements.

BY MR. CARROLL:

Q So it may or may not satisfy the Maxwell ordinance?

A Again, the Maxwell ordinance requires

that it be retrofitted 90 days after the commissioning of unit 7. So if there was an alternative way of complying with state law and regional air requirements prior to the commissioning of unit 7, it would fit in with the Maxwell ordinance. It wouldn't be a contradiction to the Maxwell ordinance.

Q Let me approach this in a different way. Could you explain to me the sequence of events that you would foresee Mirant undertaking to comply with the NOx bubble and the Maxwell ordinance with respect to unit 3?

(Parties speaking simultaneously.)

BY MR. CARROLL:

Q Let's set it up as a hypothetical. Let's assume that you were responsible for insuring compliance of unit 3 with the NOx bubble and the Maxwell ordinance. How would you go about doing that?

A Well, one way I think would be to work with the City to achieve the alternative compliance plan that was acceptable to the Bay Area Air Quality Management District.

Then to work with the City to assure that the transmission resources, such as the

cable, were completed in the timeframe necessary.

Then to, once the other resources are in place, retire unit 3. And then once unit 7 was commissioned, it would be in full compliance with the Maxwell ordinance.

Q Okay, now help me with -- can you apply some timeframes to the implementation of each of those steps, just in years, so that I can understand sequentially.

And the problem I'm having is that I thought in response to earlier questions we'd established that the construction of resources that would allow the shutdown of unit 3 weren't likely to be in place until 2006.

And so what I'm struggling with is that effective January 1, 2005, Potrero 3 either needs to be retrofit with SCR or an alternative plan needs to be put in place. And that that plant needs to continue operating at least until 2006.

Yet, as soon as those measures are implemented, whether it be the additional measures that you've described or unit 7, the plant needs to come offline. So we're looking at an effective life of the SCR retrofit of a few years.

MS. MINOR: And what's the question?

BY MR. CARROLL:

Q The question is what steps is the City recommending that Mirant implement in order to comply with the NOx bubble and the Maxwell ordinance, two of the requirements that are specifically addressed in Mr. Smeloff's testimony today.

And what I'm suggesting from our perspective, is that it's an impossibility. So what I'm trying to understand is whether I'm wrong about that.

A Well, the question is what would the City recommend, and I'm not here to -- in the position to make a recommendation. We can talk in terms of hypotheticals, which we were doing.

Q Okay, let's do that.

A It seems to me that the City -- that Mirant will be in full compliance if it came up with an alternative compliance plan for unit 3; continued to operate unit 3 until the point in time when unit 7 was commissioned. And it would shut down unit 3 when unit 7 is commissioned.

That would be in compliance with the Maxwell ordinance.

Q Okay. You indicated that you were

having discussions with the ISO and other parties about what would be required for the shutdown of Hunter's Point. And correct me if I get any of this wrong, but this was the discussion where I think you indicated that the applicant was on the periphery, am I correct about that? That there have been discussions between the City, the ISO and other parties, I assume to be PG&E, about what would be required to shut down Hunter's Point?

A Yes, there have been. We have convened -- well, let me back up. The -- in July the ISO Board adopted a policy resolution to improve the Jefferson-Martin transmission line, and to work with the city and community groups in San Francisco to develop -- I want to get this right -- to facilitate the closure of the Hunter's Point Plant or the retirement of the RMR contracts which would facilitate the closure of the Hunter's Point Plant.

Subsequent to that there have been a number of meetings that have occurred between PG&E, the ISO Staff, staff from the Public Utilities Commission, the City and some community stakeholders to do power flow analysis. And a number of power flow analyses have been conducted.

And what the load serving capability of the system is currently; what it is after the shutdown of the Hunter's Point Power Plant; what it would be with the addition of the various transmission projects we've discussed; and what it would be with the addition of three combustion turbines.

So that analysis has taken place.

Q Are you familiar with a draft agreement that Mirant presented to the City that was developed by the ISO, PG&E and Mirant related to the shutdown of Hunter's Point?

A I recall seeing that. I'm not -- I haven't read it in six, eight months, so I'm not really familiar with it.

Q Okay.

A But I've seen it.

Q Okay.

MR. CARROLL: We have nothing further at this point. Thank you.

HEARING OFFICER VALKOSKY: Mr. Westerfield.

CHAIRMAN KEESE: Is Hunter's Point under the same obligation to put SCR in, or something by the same date in 2005?

MR. SMELOFF: They are governed by the

same laws, so they have the same challenge by 2005. They face similar choices to -- although unlike Mirant, this is the only plant that PG&E owns in the Bay Area.

CHAIRMAN KEESE: So they are, at the first stage, obligated to lower their emissions?

MR. SMELOFF: That's correct, either through retrofit or through some alternative --

CHAIRMAN KEESE: But they've already agreed to shut down, so it's highly unlikely that they're going to do it.

For planning purposes shouldn't we consider that after January 2005 it's not operating?

MR. SMELOFF: I don't think you can assume that. I don't -- you can't assume that unless the ISO --

CHAIRMAN KEESE: But they can't --

MR. SMELOFF: -- removes the --

CHAIRMAN KEESE: -- they can't legally operate unless they put in SCR?

MR. SMELOFF: They can, like Mirant, put forward an alternative compliance plan using emission credits.

CHAIRMAN KEESE: Okay, one or the other.

Okay, thank you.

HEARING OFFICER VALKOSKY: Mr. Westerfield?

MR. WESTERFIELD: No questions.

MR. RAMO: No questions.

MR. ROSTOV: No questions.

HEARING OFFICER VALKOSKY: Any redirect?

MS. MINOR: No.

MR. CARROLL: I have one follow up question with respect to Mr. Smeloff's answer to Commissioner Keese.

RECROSS-EXAMINATION

BY MR. CARROLL:

Q -- the City willing to commit to not bringing legal action against either Mirant or PG&E in the event that they implement an alternative compliance plan in lieu of the SCR retrofits?

A That's beyond my capability to answer. I'm not a representative of the City. I mean I'm not the decision maker on that.

Q Okay, so they may very well be subject to risk should they choose the alternative compliance plan?

MR. RAMO: Mr. Valkosky, --

HEARING OFFICER VALKOSKY: Right, I --

MR. CARROLL: I'll withdraw the question.

MR. RAMO: Well, there's another case which my clients are involved with involving an alternative compliance plan for PG&E. There's been a settlement proposed that will clear the way for them to file an alternative compliance plan with pollution credits.

So, if that's -- sounds like that's of interest to the Committee, if the Committee wants to pursue that, I can present the settlement agreement which my clients have agreed to allow that to happen, as well as CBE and other parties. So I could file that if that's --

CHAIRMAN KEESE: You know, personally I think I'd hold off till we did the local system. Because I think that we're going to get some more fleshing out by the ISO and everything about what these issues are, but --

MR. RAMO: Present that at that time.

CHAIRMAN KEESE: I'm trying to put this in context of the discussion that I've been hearing here. Thank you.

HEARING OFFICER VALKOSKY: Is there

anything else for Mr. Smeloff?

PRESIDING MEMBER PERNELL: I have one question on the plan. Is that something that the City has to agree to, an alternative, hypothetically an alternative compliance plan? Is that the City or is that the Air District?

MR. RAMO: Procedurally the way it is worked is PG&E applied for credits; credits were granted by the Bay Area Air Quality Management District.

My clients and CBE filed an appeal and there's a deadline for filing the appeal. So the City, at this point, couldn't object to the credits.

There's still an alternative compliance plan to be issued. At that point anybody in the public could file an objection. But it's ultimately before the Bay Area District.

PRESIDING MEMBER PERNELL: It's the Air District.

MR. RAMO: Yeah.

PRESIDING MEMBER PERNELL: Okay.

HEARING OFFICER VALKOSKY: Okay, if there's nothing else for Mr. Smeloff, the Commission thanks and excuses the witness.

PRESIDING MEMBER PERNELL: Thank you, Mr. Smeloff.

CHAIRMAN KEESE: Thank you.

PRESIDING MEMBER PERNELL: Appreciate your time.

HEARING OFFICER VALKOSKY: Is there any public comment on the topic of reliability? Sir, if you could approach, identify yourself, and spell your last name.

MR. KARRAS: Yes, Commissioners, I'm Greg Karras with Communities for a Better Environment. It's K-a-r-r-a-s. I'll be brief, just a couple of points.

One, on the question of reliability and alternatives, we're doing significant cooperative work moving the reliability analysis of the City energy plan forward. And though the results aren't all in yet, in a matter of weeks I expect we'll have some results that put San Francisco's work in a very positive light on reliability relative to the proposal that you've heard about today from Mirant.

And just as a second comment, and I'll be brief because I think it's been clear all day long, if reliability is the issue, and it is here,

for the electricity system, better to have redundancy, more small plants.

We think that's just a matter of cost and we're concerned about the potential for ongoing costs for RMR contracts that could be avoided, and the ongoing cost that we're even more concerned about is the environmental injustice and pollution that could be avoided.

Thank you.

PRESIDING MEMBER PERNELL: A question on your comment on smaller plants. Is it your understanding they pollute more than larger baseload plants?

MR. KARRAS: Not necessarily. It depends on what kind of plant. The --

PRESIDING MEMBER PERNELL: Well, let's say a 49 megawatt peaker.

MR. KARRAS: It's my understanding that per megawatt, using the same fuel, it will be cleaner if you have a combined cycle. That's not what we have here. That's not the comparison that we have here at all.

We're talking about a baseload plant versus a plant that wouldn't be running very often in one case. In the other case we're talking

about diesel peakers with no end-of-pipe controls versus gas peakers with end-of-pipe controls.

So that comparison may be correct in the abstract. In this case it's actually a mischaracterization of the situation.

PRESIDING MEMBER PERNELL: Okay. So not to belabor the point, I appreciate you coming up under public comment.

MR. KARRAS: Yeah, and just to be a little bit --

PRESIDING MEMBER PERNELL: But I'm trying to understand --

MR. KARRAS: Oh, I'm sorry.

PRESIDING MEMBER PERNELL: One second -- I'm trying to understand if there was no Potrero 7, and there were additional smaller plants around the City, you're saying that they wouldn't be running all the time. So where would the additional capacity come from?

MR. KARRAS: Yeah, well, just to be clear and brief. CBE's analysis is that for particulate matter, just to pick one pollutant so I can be precise, this is the one we're most concerned about as far as we know violated air quality standards already, our analysis is that

Mirant's proposal for unit 7 could more than double the largest existing industrial source, unit 3, 110 on top of 100 tons per year.

The City's energy plan analysis suggests that as compared to current levels for power plants, a 40 percent reduction in the emissions of particulate matter by 2005. And that's from the whole mix, the whole portfolio, including the 150 megawatts of gas-fired 50-megawatt-each plants that Mr. Smeloff talked about being run not just peaking, neither, all the time, but more on an environmental dispatch.

Does that get to what you're --

PRESIDING MEMBER PERNELL: Yeah. But that assumes closing out Hunter's Point, no Potrero 7, and closing down unit 3?

MR. KARRAS: Yeah, I believe by 2005, if I remember right, we're talking about unit 3 running at 47 megawatts except when needed on contingencies. The four existing 52 megawatt diesel peakers being used in contingencies only. Three 50 megawatt combustion turbines being run in environmental dispatch; those would be new.

About 33 megawatts of distributed generation. And new efficiency in load reduction

measures, including solar and other small distributed generation. And the addition of the 115 kV line from Potrero to Hunter's Point. And the San Mateo Martin number 4 line project.

I think that's the portfolio as of 2005.

PRESIDING MEMBER PERNELL: All right, thank you.

MR. KARRAS: Thank you.

HEARING OFFICER VALKOSKY: Thank you, sir.

Any further public comment? Seeing none, we'll close the reliability topic. The last items on the agenda are things I think we can do fairly quickly.

MS. MINOR: Mr. Valkosky, I need --

HEARING OFFICER VALKOSKY: I'm sorry?

MS. MINOR: -- to move Mr. Smeloff's --

HEARING OFFICER VALKOSKY: I -- please -- I'm having a bad day with exhibits.

(Laughter.)

PRESIDING MEMBER PERNELL: They won't let you forget --

HEARING OFFICER VALKOSKY: And well they shouldn't.

(Laughter.)

MS. MINOR: Shall I proceed?

HEARING OFFICER VALKOSKY: Please do.

MS. MINOR: I move into the record as exhibit 57, the prepared testimony of Ed Smeloff regarding reliability, with two attachments.

HEARING OFFICER VALKOSKY: The attachments are the documents that were filed with the testimony --

MS. MINOR: That's correct.

HEARING OFFICER VALKOSKY: Okay, is there objection?

MR. RAMO: No objection.

MR. ROSTOV: No.

HEARING OFFICER VALKOSKY: Seeing none, exhibit 57 is admitted into evidence.

Okay, the final part is a very brief discussion upon -- the Committee is interested in the parties' input on which topics are not or least affected by cooling options.

And secondly, if you could address the suggestion made by Mr. Ratliff at the close of yesterday's hearings regarding applicant's withdrawal of its request to amend the FDOC.

For the record I'll notice that we have a representative from Neighboring Property Owners

Coalition who has joined us. If you could identify yourself for the record, please?

MS. LONDON: Jody London.

HEARING OFFICER VALKOSKY: Thank you.

PRESIDING MEMBER PERNELL: Welcome.

MS. LONDON: Thank you.

HEARING OFFICER VALKOSKY: Okay. Mr. Carroll.

MR. CARROLL: Yes.

HEARING OFFICER VALKOSKY: Oh, before we begin, again, I gave you a list yesterday. I believe I omitted alternatives as a topic which has not yet been dealt with. I would like to amend that list and put alternatives on it.

Okay.

MR. CARROLL: I believe there was actually one additional topic that was omitted yesterday which is land use.

HEARING OFFICER VALKOSKY: Land use, okay. Thank you.

MR. CARROLL: We believe that the following topics are not materially affected by the choice of cooling system: One would be the continuation of cultural resources. The second would be local system effects. And third would be

land use.

We believe that there are some additional topics. I think I mentioned yesterday that I thought air quality fell somewhere in the middle, so I guess these are in order of least affected.

And moving up that list, air quality and public health we would include. We believe those are somewhat affected by the choice of cooling system. But not substantially affected.

HEARING OFFICER VALKOSKY: And is then fair to conclude that the rest are definitely affected?

MR. CARROLL: Yes.

HEARING OFFICER VALKOSKY: The balance of the topics? Okay.

MR. CARROLL: With the caveat, I'm not sure that socioeconomics/environmental justice would be affected. So we frankly think that that one could be taken out. The Commission has typically taken that at the end of everything else. The way the staff approaches it, it bases its conclusions on EJ in particular on the analysis of all the other sections. So it logically comes at the end. But we think that one

could be taken up, as well.

HEARING OFFICER VALKOSKY: Okay. I just have one question concerning land use. It would be my understanding at this time that that would include the BCDC determination, which, to my understanding, may be rendered moot if alternative cooling is chosen.

So, is your position that given the plant as proposed, we could go to land use?

MR. CARROLL: Well, I think so. I agree with you that the BCDC determination would be rendered moot. On the other hand, I don't know that we need to spend a lot of time on the BCDC determination, because it is what it is. So I guess I wasn't anticipating that there would be a lot of discussion about it in the context of the evidentiary hearing.

HEARING OFFICER VALKOSKY: Okay. Fine. Any comment on Mr. Ratliff's suggestion from yesterday concerning applicant --

MR. CARROLL: Oh, I'm sorry. Yes.

HEARING OFFICER VALKOSKY: -- the withdrawal of the request to amend the FDOC?

MR. CARROLL: My recollection is that his question was with the parties agreeing to

drop, as a basis for any procedural request with respect to these proceedings, the amendment of the FDOC, the applicant were willing to reinstate the amendment to the FDOC.

And I think that is a good suggestion. We would be willing to do that with the additional caveat that the parties agree not to use it as a basis for procedural delay at the Air District, either.

HEARING OFFICER VALKOSKY: Okay, thank you. Mr. Westerfield?

MR. WESTERFIELD: Thank you. Staff's thought about this and so it has, I think, four topic areas that it would say are least affected by the changes in the cooling water system.

So, those would be a continuation of cultural resources; LSE, local system effects; and we would add to that list facility design. Obviously you could carve off a piece of design if the cooling system is changed, but that would obviously be a different design. But except for that I think the rest of it is severable.

And if the Committee chooses, there are areas of socioeconomic resources that you could address. But I think the past practice of

addressing environmental justice at the end of the topic matters ia a good precedent to follow, because our analysis of the environmental justice depends upon whether there's a finding of significant adverse environmental impact on any of the topic areas. And we would like to see a completion of topic areas, obviously, before you could make that judgment.

But I think there are aspects to socioeconomics that you could do, as well. So those would be our four.

HEARING OFFICER VALKOSKY: What about land use and air quality and public health, as suggested by applicant?

MR. WESTERFIELD: Well, I think the land use issues that are raised by BCDC report are very profound, and they're the central -- probably going to be the central focus of land use. So, I'd hate to see land use dealt with, and then not deal with that aspect.

HEARING OFFICER VALKOSKY: Okay, that's fair enough. How about air quality and public health?

MR. WESTERFIELD: Well, again, obviously one part of an alternative cooling system would be

the cooling water, the cooling tower and potential PM emissions from that.

So, I think that would be a topic of great interest, too. So I think we believe that we would rather not do air quality and public health in several pieces, because that would be a piece of great concern, as well.

HEARING OFFICER VALKOSKY: Okay. Thank you. Lastly, although I'm not sure it's directly applicable to staff, but I'll ask you anyway. Would you agree to the suggested stipulation by applicant that staff would agree not to use the amendment of the FDOC as a reason for delay, either here at the Commission or at the Air District?

MR. WESTERFIELD: Yes, we would.

HEARING OFFICER VALKOSKY: Thank you. Ms. Minor.

MS. MINOR: From the City's perspective there are really not a lot of topic areas that are left that don't impact on the cooling option in some way.

The two that we have come up with is the continuation of cultural resources and local system effect.

We do think land use, I think probably the only major issue really relates to the BCDC issues. And those can't be resolved until the cooling option issue is resolved.

We have public health and air quality in a kind of interim -- I actually made three lists. Yes, interim and absolutely no.

Public health and air quality I put in the interim, but I'm very uncomfortable with that because to a point in terms of the motion, we will have to come back to those topic areas once the cooling option issue is resolved. And so we don't want to either bifurcate, duplicate efforts and so forth. So I would urge that all of those go over to those topics that are directly affected by the cooling option.

HEARING OFFICER VALKOSKY: How about facility design, as suggested by staff, with the understanding that if the cooling option changed you'd have to supplement it?

MS. MINOR: Yeah, again I would not urge bifurcating that. The major facility design question that's outstanding is the cooling option. And so it should be dealt with with the cooling option sections.

HEARING OFFICER VALKOSKY: Okay. Comments, or agreement to Mr. Carroll's proposed stipulation?

MS. MINOR: Yeah, if I could just take a few minutes, because I think that the City's position may be either misunderstood or being mischaracterized.

The basis for our concern about Mirant's amendment isn't the amendment, itself. It is the fact that after filing the amendment to the FDOC Mirant contacted the Air District and said, take no action on our amendment because we may have further amendments coming. Okay.

In their amendment, their amendment purports to reduce PM10 by 50 percent and other criteria pollutants by 23 percent. If, in fact, that is correct, obviously on behalf of the citizens of the City and County of San Francisco, that's a significant thing, and that's something that we support.

As Mr. Smeloff indicated today, contrary to the representations yesterday, we have had continuous meetings with Mirant. During these meetings Mirant initially indicated to us in mid-summer, that they intended to file an amendment to

the FDOC.

We saw a preliminary draft. When we saw that preliminary draft I shared it with the City's air quality expert who immediately raised some concerns about the methodology that Mirant used.

I contacted Mirant; discussed it with them. And in addition, shared with Mirant something that they were not aware of, which is a letter dated May 29th from the EPA notifying all the local Districts not to use EPA method 8 when looking at the back half of particulate emissions.

We can't agree to Mirant's proposal because, in fact, Mirant has used EPA method 8 to reduce the particulate emissions. So we want to be able to discuss that with the Air District.

This is not obstructing for the sake of obstructing. The City has already invested a lot of time and resources in looking at this. And we think on behalf of the citizens of the City and County of San Francisco we should be entitled to go to the Air District and say, is this done correctly. Do you agree that these reductions are justified. Was the right methodology used.

And I'm not going to give up that right. And the fact that we're being held hostage is

ridiculous.

HEARING OFFICER VALKOSKY: Thank you for the clarification. The Committee appreciates it.

MS. MINOR: Thank you.

MR. CARROLL: I need to respond to that because the issue that Ms. Minor has just described is a red herring.

The fact of the matter is we are committing to the lower limits. They will be enforceable conditions in our air permit and we will have to live with them.

The way that we arrived at those limits shouldn't be of any concern at all to the City. It is a major concern to Mirant because we're the ones that have to live with it. We've revisited it in light of the EPA letter, and we're very comfortable that we can live with the limits we proposed.

So, this whole notion that we've done the analysis wrong is a complete red herring because the only one who will be hurt, if we've done the analysis wrong, is Mirant because we will have limits that we need to live with.

HEARING OFFICER VALKOSKY: Okay, again, thank you for that clarification. And it's not

something we're deciding today. We're just trying to --

MS. MINOR: Okay, because there's a further explanation or we can move on --

HEARING OFFICER VALKOSKY: No, it's --

MS. MINOR: But you can see the point is that in fact the sides have actually talked about these issues. There are some ongoing discussions going on --

HEARING OFFICER VALKOSKY: Right, I --

MS. MINOR: -- which is the major point I'm trying to make here.

HEARING OFFICER VALKOSKY: I understand that. I'm only bringing this up because Mr. Ratliff raised it yesterday, that's all.

MS. MINOR: Yeah.

PRESIDING MEMBER PERNELL: I think the point is that everyone concerned is in favor of lower emissions. That's, you know, from your political leaders to the Commission to the applicant, certainly intervenors.

So let's just try and get there. And I know that, you know, there's some difference of opinions on how that's done, but let's just try and get there.

MS. MINOR: And, Commissioner, in terms of the City's motion, I'll be happy to take that aspect out of the motion. The part that I'm not agreeing with that Mr. Carroll has suggested today is that we not continue to have discussions with the Air District about the content of the modification that they filed with the Air District.

PRESIDING MEMBER PERNELL: Right, but my point is very simple. If we can do some good for the City of San Francisco in terms of emissions, let's try and get there.

MS. MINOR: I agree.

HEARING OFFICER VALKOSKY: Especially since those emissions often travel to the Central Valley which directly affects us.

PRESIDING MEMBER PERNELL: Right, those folks in Tracy are a little bit upset with you guys.

(Laughter.)

HEARING OFFICER VALKOSKY: Mr. Ramo.

MR. RAMO: As the Hearing Officer and Commission has known, when we did this exercise before on behalf of my clients in good faith I tried to address the concerns and tried to pick

out the topics.

I'm afraid I have to take a more principled position on this question. It's our view that in light of the fact that the cooling water issue involves an agreement with San Francisco; and San Francisco has concerns with the overall designs, the contingency issue we discussed today, we feel that the entire design of this facility is in such a fluid state that we cannot state with any assurance that any of these issues, except perhaps depending on whether they're going to still knock down the brick buildings, the cultural resources issue.

Local system effects, if we end up with two units, it's really different. Public health, hybrid cooling adds ten tons of particulates a year. And we just heard about our desire to reduce it. And that, of course, relates to public health. And both of those involve cumulative health impacts, so there's no way to isolate that in reference to other sources of pollution.

So I don't want to take up much of your time here. I know you've had other input, and with the staff's assistance, can make some judgment. But I'm afraid on behalf of my client

our position is that none of these additional areas, with the possible exception of cultural resources, can be concluded until we have a design that's feasible.

HEARING OFFICER VALKOSKY: Thank you for that clarification. Anything on the proposed withdrawal?

MR. RAMO: To the extent we joined in the motion of the City, and the City listed all these grounds, we have no problem in making clear that our motion does not depend on the action of the applicant filing an amendment with the FDOC.

If Mr. Carroll -- I must admit I have been focused on the particulars recently of this amendment. If Mr. Carroll's correct in his characterization that what we're ultimately asking for is a change in the final emission limits without addressing the methodology for measuring those limits, he may be right and we would have no problem with that.

Given the City's concerns, I certainly want to take a look at what the City's concerns were. So, definitely my goal would be if they're lowering the emission limits, I have no doubt that's to the benefit of the public and it's a

great thing that the applicant, as I've said before, is doing this. And the faster we can get this resolved, the better.

HEARING OFFICER VALKOSKY: Okay, well, I mean it sounds like it's something that's subject to discussion among the parties. So I'll leave it at that.

Mr. Rostov.

MR. ROSTOV: Well, it's easy to go after Mr. Ramo, because I'm just going to join in what he said. Essentially CBE takes the same position. Potentially cultural resources, but if there's a redesign you never know, maybe not -- the buildings won't get knocked down.

And then on the air quality, CBE wouldn't agree to the idea of not contesting the Air District. I mean one person's procedural delay is another person's meaningful public comment.

So, we would like the opportunity, if necessary, to have meaningful public comment. But I do understand what Mr. Ramo was saying, and what Mr. Carroll was saying, but we wouldn't agree to giving up our right to meaningful public comment.

HEARING OFFICER VALKOSKY: Okay, thank

you. Lastly, Ms. London, on behalf of NPOC.

MS. LONDON: I think that I would definitely no, I would agree with Mr. Ramo. And I want to make a suggestion for you all that may help us out of what I perceive as a box.

When I sit back with my clients and I try to help them scope out how they should participate in this hearing, the biggest -- one of the biggest question marks for us is, is the Energy Commission going to override the BCDC determination on non-mitigable effects.

And when we think about how to structure our budget for participating we see a situation where we could go through a round of hearings, and then have you all say, on the current application have you all say oh, we're not going to override BCDC. And then we have to do it again.

And that makes it very -- that's why I keep kind of jumping in and out of the proceeding and showing up late. It's not my preferred way to operate. And if there was a way for you to perhaps indicate more decisively whether or not you would override BCDC or whether BCDC's determination is going to stand, that might provide some incentive to Mirant, or at least a

more clear signal as to whether or not it should be more actively putting forward a different cooling option.

And then you get into all the issues with the cooling option. And I think that the folks that I represent clearly have some big concerns about what those alternatives might be. But we're willing to work through them and look at them.

So that's my one additional piece of information for the day.

HEARING OFFICER VALKOSKY: Thank you. I would just note for the record that one of the questions we've got out there is whether the BCDC report is even relevant. And apparently it won't be if they change the cooling system.

And two, at least in my legal view, the Committee has to assemble, and then evaluate all of the evidence before it could make a determination on whether or not -- on the acceptability of the BCDC report.

So, you know, we can't put the cart before the horse.

MS. LONDON: No, I understand that. But I think you can also see where, from our

perspective, it's, you know, it's hard to gauge where this is all going to fall out. There's a limited budget for involvement --

HEARING OFFICER VALKOSKY: No, I understand. And I can certainly assure you that nobody up here knows where it's going to all fall out, either.

CHAIRMAN KEESE: Override is certainly the last issue.

HEARING OFFICER VALKOSKY: Yeah.

CHAIRMAN KEESE: We're not going to -- I'm certainly not going to want to face it whatsoever until we're done with everything, --

HEARING OFFICER VALKOSKY: Right.

CHAIRMAN KEESE: -- alternatives, all the way to the end.

HEARING OFFICER VALKOSKY: Yeah, that's just an unknown at this time.

At this point is there anything else? Okay, the Committee thanks the parties for their attendance, participation and good humor. And we're adjourned.

(Whereupon, at 4:20 p.m., the hearing was adjourned, to reconvene sine die.)

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CERTIFICATE OF REPORTER

I, JAMES A. RAMOS, an Electronic Reporter, do hereby certify that I am a disinterested person herein; that I recorded the foregoing California Energy Commission Hearing; that it was thereafter transcribed into typewriting.

I further certify that I am not of counsel or attorney for any of the parties to said hearing, nor in any way interested in outcome of said hearing.

IN WITNESS WHEREOF, I have hereunto set my hand this 11th day of November, 2002.